



MODULE OF RESEARCH METHODOLOGY

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KATA PENGANTAR

Module of Research Methodology ini disusun sebagai salah satu sumber belajar mahasiswa di kelas *Research Methodology in ELT* pada semester gasal 2020/2021. Modul ini berisi pokok materi kelas sebagai berikut: pengenalan tentang riset, beberapa filosofi atau paradigma riset, riset kualitatif, riset kuantitatif, riset dengan metode campuran (*mixed-methods*), dan praktik etik dalam dunia riset. Dengan bekal teori yang dibahas di kelas ini, di akhir semester, diharapkan mahasiswa mampu melakukan pembahasan kritis terhadap suatu artikel jurnal ditinjau dari metodologi dan etika riset. Karena itulah, contoh-contoh esai tugas akhir berupa pembahasan kritis artikel jurnal juga disertakan dalam modul ini untuk memberikan mahasiswa gambaran yang lebih jelas tentang ekspektasi kelas.

Silabus dan rubrik penilaian semua tugas di kelas ini juga disajikan untuk membantu mahasiswa dalam mempersiapkan pembelajaran mereka. Diharapkan mereka dapat melakukan usaha optimal setelah mengetahui kriteria-kriteria pencapaian yang diharapkan dalam setiap rubrik penilaian.

Yogyakarta, 7 September 2020

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What is meant by 'good research'?

1.2 DEFINITION AND MEANING OF RESEARCH

The word research is composed of two syllables, *re* and *search*. The dictionary defines the former as a prefix meaning again, a new or over again and the latter as a verb, meaning to examine closely and carefully, to test and try, or to probe. Together they form a noun describing a careful, systematic, patient study and investigation in some field of knowledge, undertaken to establish facts or principles (Grinnell 1993). The simplest meaning of research is to search for facts, answers to research question and solution for the problem.

Scientific Research is a systematic and objective attempt to provide answers to certain questions. The purpose of scientific research is to discover and develop an organised body of knowledge. Therefore, scientific research may be defined as the systematic and empirical analysis and recording of controlled observation, which may lead to the development of theories, concepts, generalisations and principles, resulting in prediction and control of those activities that may have some cause-effect relationship. Some of the definitions of research in literature are given below which can help you to understand proper meaning and concept of research.

Encyclopaedia of Social Science defines research as, “the manipulation of generalising to extend, connect or verify knowledge...” Manipulation incorporates experimentation adopted for the purpose of arriving at generalisation.

Kerlinger (1973) defines research as a “systematic, controlled, empirical and critical investigation of hypothetical propositions about the presumed relationship about various phenomena.”

Burns (1994) also defines research as ‘a systematic investigation to find answers to a problem’.

Thus, the term research refers to the systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analysing the facts and reaching certain conclusions either in the form of solution (s) towards the concerned problem or in certain generalisations for some theoretical formulation.

1.3 CRITERIA OF GOOD RESEARCH

The criteria for good research are as follows:

Purpose of research should be clearly defined and common concepts that are used should be operationally defined.

The research procedure should be precisely planned, focused and appropriately described in order to enable other researcher to do research for further advancement.

Research design should be carefully planned to generate results to maintained objectivity.

The research report should be as much as possible frank enough to gauge effects of the findings.

Data analysis in the research report should be adequate to reveal its significance and the method of analysis employed be appropriate and

Validity and reliability of data should be examined carefully.

1.4 OBJECTIVES OF GOOD RESEARCH

The purpose of research is to discover answers to questions through the application of scientific procedures. The main aim of research is to find out the truth which is hidden and which has not been discovered as yet. Though each research study has its own specific purpose, we may think of research objectives as falling into a number of following broad groupings:

- 1) To gain familiarity with a phenomenon or to achieve new insights into it (studies with this object in view are termed as exploratory research studies);
- 2) To portray accurately the characteristics of a particular individual, situation or group (studies with this object in view are known as descriptive research studies);
- 3) To determine the frequency with which something occurs or with which it is associated with something else (studies with this object in view are known as diagnostic research studies)*
- 4) To test a hypothesis of a causal relationship between variables (such studies are known as hypothesis- testing research studies/experimental studies).

Thus, research is the fountain of knowledge for the sake of knowledge and an important source of providing guidelines for solving different business, personal, profession governmental and social problems. It is a sort of formal training which enables one to understand the new developments in one's field in a better way.

1.5 QUALITIES OF A GOOD RESEARCH

Good research possesses certain qualities which are as follows:

Good research is systematic: it means that research is structured according to set of rules to follow certain steps in specified sequence. Systematic research also invites creative thinking, and certainly avoids use of guessing and intuition for arriving at the conclusion.

Good research is empirical: it implies that any conclusion drawn is based upon hardcore evidence gathered from information collected from real life experiences and observations. This provides a basis for external ability to research results.

Good research is valid and verifiable: Research involves precise observation and accurate description. The researcher selects reliable and valid instruments to be used in the collection of data and uses some statistical measures for accurate description of the results obtained. Whatever you conclude on the basis of finding is correct and can be verified by yourself and others.

Good Research is logical: it suggests that research is guided by the rules of reasoning and logical process of induction (general to specific) and deduction (specific to general) that plays an important role in carrying out research. In fact, logical reasoning makes research feasible and more meaningful in the context of decision making.

Good research develops theories and principles: which are very helpful in accurate prediction regarding the variables under study. On the basis of the sample observed and studied, the researcher makes sound generalisations regarding the whole populations. Thus, research goes beyond immediate situations, objects or groups being investigated by formulating a generalisation or theory about these factors.

Research is replicable: the designs, procedures and results of scientific research should be replicable so that any person other than the researcher himself may assess their validity. Thus, one researcher may use or transit the results obtained by another researcher. Thus, the procedures and results of the research are replicable as well as transmittable.

The Selection of a Research Approach

Research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. This plan involves several decisions, and they need not be taken in the order in which they make sense to me and the order of their presentation here. The overall decision involves which approach should be used to study a topic. Informing this decision should be the philosophical assumptions the researcher brings to the study; procedures of inquiry (called *research designs*); and specific *research methods* of data collection, analysis, and interpretation. The selection of a research approach is also based on the nature of the *research problem* or issue being addressed, the researchers' personal experiences, and the audiences for the study. Thus, in this book, *research approaches*, *research designs*, and *research methods* are three key terms that represent a perspective about research that presents information in a successive way from broad constructions of research to the narrow procedures of methods.

THE THREE APPROACHES TO RESEARCH

In this book, three research approaches are advanced: (a) qualitative, (b) quantitative, and (c) mixed methods. Unquestionably, the three approaches are not as discrete as they first appear. Qualitative and quantitative approaches should not be viewed as rigid, distinct categories, polar opposites, or dichotomies. Instead, they represent different ends on a continuum (Newman & Benz, 1998). A study *tends* to be more qualitative than quantitative or vice versa. *Mixed methods research* resides in the middle of this continuum because it incorporates elements of both qualitative and quantitative approaches.

Often the distinction between *qualitative research* and *quantitative research* is framed in terms of using words (qualitative) rather than numbers (quantitative), or using closed-ended questions (quantitative hypotheses) rather than open-ended questions (qualitative interview questions). A more complete way to view the gradations of differences between them is in the basic philosophical assumptions researchers bring to the study, the types of research strategies used in the research (e.g., quantitative experiments or qualitative case studies), and the specific methods employed in conducting these strategies (e.g., collecting data quantitatively on instruments versus collecting qualitative data through observing a setting). Moreover, there is a historical evolution to both approaches—with the quantitative approaches dominating the forms of research in the social sciences from the late 19th century up until the mid-20th century. During the latter half of the 20th century, interest in qualitative research increased and along with it, the development of mixed methods research. With this background, it should prove helpful to view definitions of these three key terms as used in this book:

- *Qualitative research* is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data. The final written report has a flexible structure. Those who engage in this form of inquiry support a way of looking at research that honors an inductive style, a focus on individual meaning, and the importance of rendering the complexity of a situation.

- *Quantitative research* is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures. The final written report has a set structure consisting of introduction, literature and theory, methods, results, and discussion. Like qualitative researchers, those who engage in this form of inquiry have assumptions about testing theories deductively, building in protections against bias, controlling for alternative explanations, and being able to generalize and replicate the findings.

- *Mixed methods research* is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. The core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone.

These definitions have considerable information in each one of them. Throughout this book, I

CRITERIA FOR SELECTING A RESEARCH APPROACH

Given the possibility of qualitative, quantitative, or mixed methods approaches, what factors affect a choice of one approach over another for the design of a proposal? Added to worldview, design, and methods would be the research problem, the personal experiences of the researcher, and the audience(s) for whom the report will be written.

The Research Problem and Questions

A research problem, more thoroughly discussed in Chapter 5, is an issue or concern that needs to be addressed (e.g., the issue of racial discrimination). The problem comes from a void in the literature, and conflict in research results in the literature, topics that have been neglected in the literature; a need to lift up the voice of marginalized participants; and "real-life" problems found in the workplace, the home, the community, and so forth.

Certain types of social research problems call for specific approaches. For example, if the problem calls for (a) the identification of factors that influence an outcome, (b) the utility of an intervention, or (c) understanding the best predictors of outcomes, then a quantitative approach is best. It is also the best approach to use to test a theory or explanation. On the other hand, if a concept or phenomenon needs to be explored and understood because little research has been done on it, then it merits a qualitative approach. Qualitative research is especially useful when the researcher does not know the important variables to examine. This type of approach may be needed because the topic is new, the subject has never been addressed with a certain sample or group of people, and existing theories do not apply with the particular sample or group under study (Morse, 1991). A mixed methods design is useful when the quantitative or qualitative approach, each by itself, is inadequate to best understand a research problem and the strengths of both quantitative and qualitative research (and its data) can provide the best understanding. For example, a researcher may want to both generalize the findings to a population as well as develop a detailed view of the meaning of a phenomenon or concept for individuals. In this research, the inquirer first explores generally to learn what variables to study and then studies those variables with a large sample of individuals. Alternatively, researchers may first survey a large number of individuals and then follow up with a few participants to obtain their specific views and their voices about the topic. In these situations, collecting both closed-ended quantitative data and open-ended qualitative data proves advantageous.

Personal Experiences

Researchers' own personal training and experiences also influence their choice of approach. An individual trained in technical, scientific writing, statistics, and computer statistical programs and familiar with quantitative journals in the library would most likely choose the quantitative design. On the other hand, individuals who enjoy writing in a literary way or conducting personal interviews or making up-close observations may gravitate to the qualitative approach. The mixed methods researcher is an individual familiar with both quantitative and qualitative research. This person also has the time and resources to collect both quantitative and qualitative data and has outlets for mixed methods studies, which tend to be large in scope.

Since quantitative studies are the traditional mode of research, carefully worked out procedures and rules exist for them. Researchers may be more comfortable with the highly systematic procedures of quantitative research. Also, for some individuals, it can be uncomfortable to challenge accepted approaches among some faculty by using qualitative and transformative approaches to inquiry. On the other hand, qualitative approaches allow room to be innovative and to work more within researcher-designed frameworks. They allow more creative, literary-style writing, a form that individuals may like to use. For transformative writers, there is undoubtedly a strong stimulus to pursue topics that are of personal interest—issues that relate to marginalized people and an interest in creating a better society for them and everyone.

For the mixed methods researcher, the project will take extra time because of the need to collect and analyze both quantitative and qualitative data. It fits a person who enjoys both the structure of quantitative research and the flexibility of qualitative inquiry.

Audience

Finally, researchers write for audiences that will accept their research. These audiences may be journal editors and readers, faculty committees, conference attendees, or colleagues in the field. Students should consider the approaches typically supported and used by their advisers. The experiences of these audiences with quantitative, qualitative, or mixed methods studies can shape the decision made about the choice of design.

SUMMARY

In planning a research project, researchers need to identify whether they will employ a qualitative, quantitative, or mixed methods approach. This approach is based on bringing together a worldview or assumptions about research, a specific design, and research methods. Decisions about choice of an approach are further influenced by the research problem or issue being studied, the personal experiences of the researcher, and the audience for whom the researcher writes.

Qualitative methods of research



Qualitative Methods

Qualitative methods demonstrate a different approach to scholarly inquiry than methods of quantitative research. Although the processes are similar, qualitative methods rely on text and image data, have unique steps in data analysis, and draw on diverse designs. Writing a methods section for a proposal for qualitative research partly requires educating readers as to the intent of qualitative research, mentioning specific designs, carefully reflecting on the role the researcher plays in the study, drawing from an ever-expanding list of types of data sources, using specific protocols for recording data, analyzing the information through multiple steps of analysis, and mentioning approaches for documenting the accuracy—or validity—of the data collected. This chapter addresses these important components of writing a good qualitative methods section into a proposal. Table 9.1 presents a checklist for reviewing the qualitative methods section of your proposal to determine whether you have addressed important topics.

Table 9.1 A Checklist of Questions for Designing a Qualitative Procedure

_____	Are the basic characteristics of qualitative studies mentioned?
_____	Is the specific type of qualitative design to be used in the study mentioned? Is the history of, a definition of, and applications for the design mentioned?
_____	Does the reader gain an understanding of the researcher's role in the study (past historical, social, cultural experiences, personal connections to sites and people, steps in gaining entry, and sensitive ethical issues) and how they may shape interpretations made in the study?
_____	Is the purposeful sampling strategy for sites and individuals identified?

(Continued)

Table 9.1 (Continued)

_____	Are the specific forms of data collection mentioned and a rationale given for their use?
_____	Are the procedures for recording information during the data collection detailed (such as protocols)?
_____	Are the data analysis steps identified?
_____	Is there evidence that the researcher has organized the data for analysis?
_____	Has the researcher reviewed the data generally to obtain a sense of the information?
_____	Has the researcher coded the data?
_____	Have the codes been developed to form a description and/or to identify themes?
_____	Are the themes interrelated to show a higher level of analysis and abstraction?
_____	Are the ways that the data will be represented mentioned—such as in tables, graphs, and figures?
_____	Have the bases for interpreting the analysis been specified (personal experiences, the literature, questions, action agenda)?
_____	Has the researcher mentioned the outcome of the study (developed a theory, provided a complex picture of themes)?
_____	Have multiple strategies been cited for validating the findings?

THE COMPONENTS OF QUALITATIVE METHODS

The qualitative methods section of a proposal requires attention to topics that are similar to a quantitative (or mixed methods) project. These involve telling the reader about the design being used in the study and, in this case, the use of qualitative research and its basic intent. It also involves discussing the sample for the study and the overall data collection and recording procedures. It further expands on the data analysis steps and the methods used for presenting the data, interpreting it, validating it, and indicating the potential outcomes of the study. In contrast to other designs, the qualitative approach includes comments by the researcher about their role, and the specific type of qualitative strategy being used. Further, because the writing structure of a qualitative project may vary considerably from study to study, the methods section should also include comments about the nature of the final written product. Recall that earlier in

Chapter 4, in Examples 4.1 and 4.2, I provided an overview of the structure of a qualitative proposal that included these methods components.

The Characteristics of Qualitative Research

For many years, proposal writers had to discuss the characteristics of qualitative research and convince faculty and audiences as to their legitimacy. Now these discussions are less frequently found in the literature and there is some consensus as to what constitutes qualitative inquiry. Thus, my suggestions about this section of a proposal are as follows:

- Review the needs of potential audiences for the proposal. Decide whether audience members are knowledgeable enough about the characteristics of qualitative research that this section is not necessary.

- If there is some question about their knowledge, present the basic characteristics of qualitative research in the proposal and possibly discuss a recent qualitative research journal article (or study) to use as an example to illustrate the characteristics.

- If you present the basic characteristics, what ones should you mention? Fortunately, there is some common agreement today about the core characteristics that define qualitative research. A number of authors of introductory texts convey these characteristics, such as Creswell (2013), Hatch (2002), and Marshall and Rossman (2011).

- *Natural setting:* Qualitative researchers tend to collect data in the field at the site where participants experience the issue or problem under study. They do not bring individuals into a lab (a contrived situation), nor do they typically send out instruments for individuals to complete. This up-close information gathered by actually talking directly to people and seeing them behave and act within their context is a major characteristic of qualitative research. In the natural setting, the researchers have face-to-face interaction, often over time.
- *Researcher as key instrument:* Qualitative researchers collect data themselves through examining documents, observing behavior, or interviewing participants. They may use a protocol—an instrument for collecting data—but the researchers are the ones who actually gather the information. They do not tend to use or rely on questionnaires or instruments developed by other researchers.
- *Multiple sources of data:* Qualitative researchers typically gather multiple forms of data, such as interviews, observations, documents, and audiovisual information rather than rely on a single

data source. Then the researchers review all of the data, make sense of it, and organize it into categories or themes that cut across all of the data sources.

- *Inductive and deductive data analysis:* Qualitative researchers build their patterns, categories, and themes from the bottom up by organizing the data into increasingly more abstract units of information. This inductive process illustrates working back and forth between the themes and the database until the researchers have established a comprehensive set of themes. Then deductively, the researchers look back at their data from the themes to determine if more evidence can support each theme or whether they need to gather additional information. Thus, while the process begins inductively, deductive thinking also plays an important role as the analysis moves forward.
- *Participants' meanings:* In the entire qualitative research process, the researcher keeps a focus on learning the meaning that the participants hold about the problem or issue, not the meaning that the researchers bring to the research or that writers express in the literature.
- *Emergent design:* The research process for qualitative researchers is emergent. This means that the initial plan for research cannot be tightly prescribed, and some or all phases of the process may change or shift after the researcher enters the field and begins to collect data. For example, the questions may change, the forms of data collection may shift, and the individuals studied and the sites visited may be modified. The key idea behind qualitative research is to learn about the problem or issue from participants and to address the research to obtain that information.
- *Reflexivity:* In qualitative research, the inquirer reflects about how their role in the study and their personal background, culture, and experiences hold potential for shaping their interpretations, such as the themes they advance and the meaning they ascribe to the data. This aspect of the methods is more than merely advancing biases and values in the study, but how the background of the researchers actually may shape the direction of the study.
- *Holistic account:* Qualitative researchers try to develop a complex picture of the problem or issue under study. This involves reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges. A visual model of many facets of a process or a central phenomenon aids in establishing this holistic picture (see, for example, Creswell & Brown, 1992).

Qualitative Designs

Beyond these general characteristics are more specific designs. These designs focus on data collection, analysis, and writing, but they originate out of disciplines and flow throughout the process of research (e.g., types of problems, ethical issues of importance). Many designs exist, such as the 28 approaches identified by Tesch (1990), the 22 types in Wolcott's (2009) tree, and the five traditions to qualitative inquiry by Creswell (2013). Marshall and Rossman (2011) discussed five types common across five different authors. As mentioned in Chapter 1, I recommend that qualitative researchers choose from among the possibilities, such as narrative, phenomenology, ethnography, case study, and grounded theory. I selected these five because they were popular across the social and health sciences today. Others exist that have been addressed adequately in qualitative books, such as participatory action research (Kemmis & Wilkinson, 1998) or discourse analysis (Cheek, 2004). In the designs, researchers might study individuals (narrative, phenomenology); explore processes, activities, and events (case study, grounded theory); or learn about broad culture-sharing behavior of individuals or groups (ethnography).

In writing a procedure for a qualitative proposal, consider the following research tips:

- Identify the specific design that you will be using and provide references to the literature that discusses the approach.
- Provide some background information about the design, such as its discipline origin, the applications of it (preferably to your field), and a brief definition of it (see Chapter 1 for the five designs).
- Discuss why it is an appropriate strategy to use in the proposed study.
- Identify how the use of the design will shape many aspects of the design process, such as the title, the problem, the research questions, the data collection and analysis and report write-up.

The Researcher's Role

As mentioned in the list of characteristics, qualitative research is interpretative research: the inquirer is typically involved in a sustained and intensive experience with participants. This introduces a range of strategic, ethical, and personal issues into the qualitative research process (Locke, Spirduso, & Silverman, 2013). With these concerns in mind, inquirers explicitly identify reflexively their biases, values, and personal background, such as gender, history, culture, and socioeconomic status (SES) that shape their interpretations formed during a study. In addition, gaining entry to a research site and the ethical issues that might arise are also elements of the researcher's role.

- Include statements about past experiences with the research problem or with the participants or setting that help the reader understand the connection between the researchers and the study. These experiences may involve participation in the setting, past educational or work experiences, or culture, ethnicity, race, SES, or other demographics that tie the researchers directly to the study.

- Be explicit, then, about how these experiences may potentially shape the interpretations the researchers make during the study. For example, the experiences may cause researchers to lean toward certain themes, to actively look for evidence to support their positions, and to create favorable or unfavorable conclusions about the sites or participants.

- Comment on connections between the researchers and the participants and on the research sites that may unduly influence the researchers' interpretations. "Backyard" research (Glesne & Peshkin, 1992) involves studying researchers own organization, or friends, or immediate work setting. This often leads to compromises in the researchers' ability to disclose information and raises issues of an imbalance of power between the inquirers and the participants. When researchers collect data at their own workplace (or when they are in a superior role to participants), the information may be convenient and easy to collect, but it may not be accurate information and may jeopardize the roles of the researchers and the participants. If studying the backyard is essential, then researchers hold the responsibility for showing how the data will not be compromised and how such information will not place the participants (or the researchers) at risk. In addition, multiple strategies for validation are necessary to demonstrate the accuracy of the information.

- Indicate steps taken to obtain permission from the institutional review board (IRB) (see Chapter 4) to protect the rights of human participants. Attach, as an appendix, the approval letter from the IRB and discuss the process involved in securing permissions.

- Discuss steps taken to gain entry to the setting and to secure permissions to study the participants or situation (Marshall & Rossman, 2011). It is important to gain access to research or archival sites by seeking the approval of **gatekeepers**, individuals at the site who provide access to the site and allow or permit the research to be done. A brief proposal might need to be developed and submitted for review to gatekeepers. Bogdan and Biklen (1992) advanced topics that could be addressed in such a proposal:

- Why was the site chosen for study?
- What activities will occur at the site during the research study?
- Will the study be disruptive?
- How will the results be reported?
- What will the gatekeeper gain from the study?

- Comment about sensitive ethical issues that may arise (see Chapter 3). For each issue raised, discuss how the research study will address it. For example, when studying a sensitive topic, it is necessary to mask names of people, places, and activities. In this situation, the process for masking information requires discussion in the proposal.

Data Collection Procedures

Comments about the role of the researcher set the stage for discussion of issues involved in collecting data. The data collection steps include setting the boundaries for the study, collecting information through unstructured or semi structured observations and interviews, documents, and visual materials, as well as establishing the protocol for recording information.

- Identify the *purposefully selected* sites or individuals for the proposed study. The idea behind qualitative research is to **purposefully select** participants or sites (or documents or visual material) that will best help the researcher understand the problem and the research question. This does not necessarily suggest random sampling or selection of a large number of participants and sites, as typically found in quantitative research. A discussion about participants and site might include four aspects identified by Miles and Huberman (1994): (a) the setting (i.e., where the research will take place), (b) the actors (i.e., who will be observed or interviewed), (c) the events (i.e., what the actors will be observed or interviewed doing), and (d) the process (i.e., the evolving nature of events undertaken by the actors within the setting).

- A related topic would be the number of sites and participants to be involved in your study. Aside from the small number that characterizes qualitative research, how many sites and participants should you have? First of all, there is no specific answer to this question: although I have taken the position (Creswell, 2013) that sample size depends on the qualitative design being used (e.g., ethnography, case study). From my review of many qualitative research studies I have found narrative research to include one or two individuals; phenomenology to typically range from three to ten; grounded theory, twenty to thirty; ethnography to examine one single culture-sharing group with numerous artifacts, interviews, and observations; and case studies to include about four to five cases. This is certainly one approach to the sample size issue. Another approach is equally viable. The idea of **saturation** comes from grounded theory. Charmaz (2006) said that you stop collecting data when the categories (or themes) are saturated: when gathering fresh data no longer sparks new insights or reveals new properties.

- Indicate the type or types of data to be collected. In many qualitative studies, inquirers collect multiple forms of data and spend a considerable

time in the natural setting gathering information. The collection procedures in qualitative research involve four basic types and their strengths and limitations, as shown in Table 9.2.

- A **qualitative observation** is when the researcher takes field notes on the behavior and activities of individuals at the research site. In these field notes, the researcher records, in an unstructured or semistructured way (using some prior questions that the inquirer wants to know), activities at the research site. Qualitative observers may also engage in roles varying from a nonparticipant to a complete participant. Typically these observations are open-ended in that the researchers ask general questions of the participants allowing the participants to freely provide their views.
 - In **qualitative interviews**, the researcher conducts face-to-face interviews with participants, telephone interviews, or engages in focus group interviews with six to eight interviewees in each group. These interviews involve unstructured and generally open-ended questions that are few in number and intended to elicit views and opinions from the participants.
 - During the process of research, the investigator may collect **qualitative documents**. These may be public documents (e.g., newspapers, minutes of meetings, official reports) or private documents (e.g., personal journals and diaries, letters, e-mails).
 - A final category of qualitative data consists of **qualitative audio and visual materials**. This data may take the form of photographs, art objects, videotapes, website main pages, e-mails, text messages, social media text, or any forms of sound. Include creative data collection procedures that fall under the category of visual ethnography (Pink, 2001) and which might include living stories, metaphorical visual narratives, and digital archives (Clandinin, 2007).
 - In a discussion about data collection forms, be specific about the types and include arguments concerning the strengths and weaknesses of each type, as discussed in Table 9.2.
- Include data collection types that go beyond typical observations and interviews. These unusual forms create reader interest in a proposal and can capture useful information that observations and interviews may miss. For example, examine the compendium of types of data in Table 9.3 that can be used, to stretch the imagination about possibilities, such as gathering sounds or tastes, or using cherished items to elicit comments during an interview.

Table 9.2 Qualitative Data Collection Types, Options, Advantages, and Limitations

Data Collection Types	Options Within Types	Advantages of the Type	Limitations of the Type
Observations	<ul style="list-style-type: none"> • Complete participant—researcher conceals role • Observer as participant—role of researcher is known • Participant as observer—observation role secondary to participant role • Complete observer—researcher observes without participating 	<ul style="list-style-type: none"> • Researcher has a firsthand experience with participant. • Researcher can record information as it occurs. • Unusual aspects can be noticed during observation. • Useful in exploring topics that may be uncomfortable for participants to discuss. 	<ul style="list-style-type: none"> • Researcher may be seen as intrusive. • Private information may be observed that researcher cannot report. • Researcher may not have good attending and observing skills. • Certain participants (e.g., children) may present special problems in gaining rapport.
Interviews	<ul style="list-style-type: none"> • Face-to-face—one-on-one, in-person interview • Telephone—researcher interviews by phone • Focus group—researcher interviews participants in a group • E-mail Internet interview 	<ul style="list-style-type: none"> • Useful when participants cannot be directly observed. • Participants can provide historical information. • Allows researcher control over the line of questioning. 	<ul style="list-style-type: none"> • Provides indirect information filtered through the views of interviewees. • Provides information in a designated place rather than the natural field setting. • Researcher's presence may bias responses. • Not all people are equally articulate and perceptive.
Documents	<ul style="list-style-type: none"> • Public documents—minutes of meetings or newspapers • Private documents—journals, diaries, or letters 	<ul style="list-style-type: none"> • Enables a researcher to obtain the language and words of participants. • Can be accessed at a 	<ul style="list-style-type: none"> • Not all people are equally articulate and perceptive. • May be protected information unavailable to public or private access.

(Continued)

Table 9.2 (Continued)

Data Collection Types	Options Within Types	Advantages of the Type	Limitations of the Type
		<ul style="list-style-type: none"> • time convenient to researcher—an unobtrusive source of information. • Represents data to which participants have given attention. • As written evidence, it saves a researcher the time and expense of transcribing. 	<ul style="list-style-type: none"> • Requires the researcher to search out the information in hard-to-find places. • Requires transcribing or optically scanning for computer entry. • Materials may be incomplete. • The documents may not be authentic or accurate.
Audio-Visual Materials	<ul style="list-style-type: none"> • Photographs • Videotapes • Art objects • Computer messages • Sounds • Film 	<ul style="list-style-type: none"> • May be an unobtrusive method of collecting data. • Provides an opportunity for participants to directly share their reality. • It is creative in that it captures attention visually. 	<ul style="list-style-type: none"> • May be difficult to interpret. • May not be accessible publicly or privately. • The presence of an observer (e.g., photographer) may be disruptive and affect responses.

NOTE: This table includes material adapted from Bogdan & Biklen (1992), Creswell (2013), and Merriam (1998).

Table 9.3 A List of Qualitative Data Collection Approaches

Observations
<ul style="list-style-type: none"> • Gather field notes by conducting an observation as a participant. • Gather field notes by conducting an observation as an observer. • Gather field notes by spending more time as a participant than as an observer. • Gather field notes by spending more time as an observer than as a participant. • Gather field notes first by observing as a "participant-outsider" and then moving into the setting and observing as a "participant-insider."

Validity and Reliability

Although validation of findings occurs throughout the steps in the process of research (as shown in Figure 9.1), this discussion focuses on it to enable a researcher to write a passage into a proposal on the procedures for validating the findings that will be undertaken in a study. Proposal developers need to convey the steps they will take in their studies to check for the accuracy and credibility of their findings. Validity does not carry the same connotations in qualitative research as it does in quantitative research: nor is it a companion of reliability (examining stability) or generalizability (the external validity of applying results to new settings, people, or samples; both are discussed in Chapter 8). **Qualitative validity** means that the researcher checks for the accuracy of the findings by employing certain procedures, while **qualitative reliability** indicates that the researcher's approach is consistent across different researchers and different projects (Gibbs, 2007).

Validity is one of the strengths of qualitative research and is based on determining whether the findings are accurate from the standpoint of the researcher, the participant, or the readers of an account (Creswell & Miller, 2000). Terms abound in the qualitative literature that address validity, such as *trustworthiness*, *authenticity*, and *credibility* (Creswell & Miller, 2000), and it is a much-discussed topic (Lincoln, Lynham, & Guba, 2011).

A procedural perspective that I recommend for research proposals is to identify and discuss one or more strategies available to check the accuracy of the findings. The researcher actively incorporates **validity strategies** into their proposal. I recommend the use of multiple approaches, and these should enhance the researcher's ability to assess the accuracy of findings as well as convince readers of that accuracy. There are eight primary strategies, organized from those most frequently used and easy to implement to those occasionally used and more difficult to implement:

- *Triangulate* different data sources of information by examining evidence from the sources and using it to build a coherent justification for themes. If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding to the validity of the study.
- Use *member checking* to determine the accuracy of the qualitative findings through taking the final report or specific descriptions or themes back to participants and determining whether these participants feel that they are accurate. This does not mean taking back the raw transcripts to check for accuracy; instead, the researcher takes back parts

of the polished or semi-polished product, such as the major findings, the themes, the case analysis, the grounded theory, the cultural description, and so forth. This procedure can involve conducting a follow-up interview with participants in the study and providing an opportunity for them to comment on the findings.

- Use a *rich, thick description* to convey the findings. This description may transport readers to the setting and give the discussion an element of shared experiences. When qualitative researchers provide detailed descriptions of the setting, for example, or offer many perspectives about a theme, the results become more realistic and richer. This procedure can add to the validity of the findings.
- Clarify the *bias* the researcher brings to the study. This self-reflection creates an open and honest narrative that will resonate well with readers. Reflectivity has already been mentioned as a core characteristic of qualitative research. Good qualitative research contains comments by the researchers about how their interpretation of the findings is shaped by their background, such as their gender, culture, history, and socioeconomic origin.
- Also present *negative or discrepant information* that runs counter to the themes. Because real life is composed of different perspectives that do not always coalesce, discussing contrary information adds to the credibility of an account. A researcher can accomplish this by discussing evidence about a theme. Most evidence will build a case for the theme; researchers can also present information that contradicts the general perspective of the theme. By presenting this contradictory evidence, the account becomes more realistic and more valid.
- Spend *prolonged time* in the field. In this way, the researcher develops an in-depth understanding of the phenomenon under study and can convey detail about the site and the people that lends credibility to the narrative account. The more experience that a researcher has with participants in their settings, the more accurate or valid will be the findings.
- Use *peer debriefing* to enhance the accuracy of the account. This process involves locating a person (a peer debriefer) who reviews and asks questions about the qualitative study so that the account will resonate with people other than the researcher. This strategy—involving an interpretation beyond the researcher and invested in another person—adds validity to an account.
- Use an *external auditor* to review the entire project. As distinct from a peer debriefer, this auditor is not familiar with the researcher or the project and can provide an objective assessment of the project throughout the process of research or at the conclusion of the study. The role is similar to that of a fiscal auditor, and specific questions exist that

auditors might ask (Lincoln & Guba, 1985). The procedure of having an independent investigator look over many aspects of the project (e.g., accuracy of transcription, the relationship between the research questions and the data, the level of data analysis from the raw data through interpretation) enhances the overall validity of a qualitative study.

How do qualitative researchers check to determine if their approaches are reliable (i.e., consistent or stable)? Yin (2009) suggested that qualitative researchers need to document the procedures of their case studies and to document as many of the steps of the procedures as possible. He also recommended setting up a detailed case study protocol and database, so that others can follow the procedures. Gibbs (2007) suggested several qualitative reliability procedures:

- Check transcripts to make sure that they do not contain obvious mistakes made during transcription.
- Make sure that there is not a drift in the definition of codes, a shift in the meaning of the codes during the process of coding. This can be accomplished by constantly comparing data with the codes and by writing memos about the codes and their definitions (see the discussion on a qualitative codebook).
- For team research, coordinate the communication among the coders by regular documented meetings and by sharing the analysis.
- Cross-check codes developed by different researchers by comparing results that are independently derived. Proposal writers need to include several of these procedures as evidence that they will have consistent results in their proposed study. I recommend that several procedures be mentioned in a proposal and that single researchers find another person who can cross-check their codes for what is called **intercoder agreement** (or cross-checking) (also see Guest et al., 2012). Such an agreement might be based on whether two or more coders agree on codes used for the same passages in the text. It is not that they code the same passage of text but whether another coder would code it with the same or a similar code. Reliability subprograms in qualitative computer software packages can then be used to determine the level of consistency of coding. Miles and Huberman (1994) recommended that the consistency of the coding be in agreement at least 80% of the time for good qualitative reliability.

Qualitative generalization is a term that is used in a limited way in qualitative research, since the intent of this form of inquiry is not to generalize findings to individuals, sites, or places outside of those under study (see Gibbs, 2007, for his cautionary note about qualitative generalizability). In fact, the value of qualitative research lies in the particular description

and themes developed in context of a specific site. Particularity rather than generalizability (Greene & Caracelli, 1997) is the hallmark of good qualitative research. However, there are a few discussions in the qualitative literature about generalizability, especially as applied to case study research in which the inquirer studies several cases. Yin (2009), for example, felt that qualitative case study results can be generalized to some broader theory. The generalization occurs when qualitative researchers study additional cases and generalize findings to the new cases. It is the same as the replication logic used in experimental research. However, to repeat a case study's findings in a new case setting requires good documentation of qualitative procedures, such as a protocol for documenting the problem in detail and the development of a thorough case study database.

WRITING THE QUALITATIVE REPORT

A plan for qualitative methods should end with some comments about the narrative that will emerge from the data analysis. Numerous varieties of narratives exist, and examples from scholarly journals illustrate these models. In a plan for a study, consider advancing several points about the narrative.

- The basic procedure in reporting the results of a qualitative study are to develop descriptions and themes from the data (see Figure 9.1), to present these descriptions and themes that convey multiple perspectives from participants and detailed descriptions of the setting or individuals. Using a qualitative strategy of inquiry, these results may also provide a chronological narrative of an individual's life (narrative research), a detailed description of their experiences (phenomenology), a theory generated from the data (grounded theory), a detailed portrait of a culture-sharing group (ethnography), or an in-depth analysis of one or more cases (case study).

- Given these different strategies, the findings and interpretation sections of a plan for a study might discuss how the sections will be presented: as objective accounts, fieldwork experiences (Van Maanen, 1988), a chronology, a process model, an extended story, an analysis by cases or across cases, or a detailed descriptive portrait.

- At the specific level, there might be some comment in the proposal about writing strategies that will be used to convey the qualitative research. These might include the following:

- Quotes: From short to long embedded passages
- Dialogue that reflects the culture of participants, their language, and a sensitivity to their culture or ethnicity, and the interweaving of words from participants and the author's interpretations

- Varied narrative forms, such as matrices, comparison tables, diagrams
- First person "I" or collective "we" pronouns in the narration
- Metaphors and analogies (see, for example, Richardson, 1990)
- Narrative forms associated with specific qualitative strategies (e.g., description in case studies and ethnographies, a detailed story in narrative research)

The following is an example of a complete qualitative methods section that was included in a proposal by Miller (1992). It contains most of the topics for a good qualitative methods section addressed in this chapter.

Example 9.1 *Qualitative Procedures*

Miller's project was an ethnographic study of first-year experiences of the president of a 4-year college. As I present this discussion, I refer back to the sections addressed in this chapter and highlight them in boldfaced type. Also, I have maintained Miller's use of the term *informant*, although today, the more appropriate term *participant* should be used.

The Qualitative Research Paradigm

The qualitative research paradigm has its roots in cultural anthropology and American sociology (Kirk & Miller, 1986). It has only recently been adopted by educational researchers (Borg & Gall, 1989). The intent of qualitative research is to understand a particular social situation, event, role, group, or interaction (Locke, Spirduso, & Silverman, 1987). It is largely an investigative process where the researcher gradually makes sense of a social phenomenon by contrasting, comparing, replicating, cataloguing and classifying the object of study (Miles & Huberman, 1984). Marshall and Rossman (1989) suggest that this entails immersion in the everyday life of the setting chosen for the study; the researcher enters the informants' world and through ongoing interaction, seeks the informants' perspectives and meanings. [*Qualitative assumptions are mentioned.*]

Scholars contend that qualitative research can be distinguished from quantitative methodology by numerous unique characteristics that are inherent in the design. The following is a synthesis of commonly articulated assumptions regarding characteristics presented by various researchers.

1. Qualitative research occurs in natural settings, where human behavior and events occur.

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2. Qualitative research is based on assumptions that are very different from quantitative designs. Theory or hypotheses are not established a priori.
3. The researcher is the primary instrument in data collection rather than some inanimate mechanism (Eisner, 1991; Frankel & Wallen, 1990; Lincoln & Guba, 1985; Merriam, 1988).
4. The data that emerge from a qualitative study are descriptive. That is, data are reported in words (primarily the participant's words) or pictures, rather than in numbers (Fraenkel & Wallen, 1990; Locke et al., 1987; Marshall & Rossman, 1989; Merriam, 1988).
5. The focus of qualitative research is on participants' perceptions and experiences, and the way they make sense of their lives (Fraenkel & Wallen, 1990; Locke et al., 1987; Merriam, 1988). The attempt is therefore to understand not one, but multiple realities (Lincoln & Guba, 1985).
6. Qualitative research focuses on the process that is occurring as well as the product or outcome. Researchers are particularly interested in understanding how things occur (Fraenkel & Wallen, 1990; Merriam, 1988).
7. Idiographic interpretation is utilized. In other words, attention is paid to particulars; and data is interpreted in regard to the particulars of a case rather than generalizations.
8. Qualitative research is an emergent design in its negotiated outcomes. Meanings and interpretations are negotiated with human data sources because it is the subjects' realities that the researcher attempts to reconstruct (Lincoln & Guba, 1985; Merriam, 1988).
9. This research tradition relies on the utilization of tacit knowledge (intuitive and felt knowledge) because often the nuances of the multiple realities can be appreciated most in this way (Lincoln & Guba, 1985). Therefore, data are not quantifiable in the traditional sense of the word.
10. Objectivity and truthfulness are critical to both research traditions. However, the criteria for judging a qualitative study differ from quantitative research. First and foremost, the researcher seeks believability, based on coherence, insight and instrumental utility (Eisner, 1991) and trustworthiness (Lincoln & Guba, 1985) through a process of verification rather than through traditional validity and reliability measures. *[Qualitative characteristics are mentioned.]*

Quantitative methods of research

2.2 Quantitative research

Let us set out on a more detailed examination of the three research approaches. The fact that I begin with the analysis of quantitative research is not to be taken as an indication of a hierarchical order. My reason is purely pragmatic: because qualitative research gained paradigmatic status as a reaction against quantitative research, it is practical to get to know quantitative research first, as a kind of baseline. I will follow this practice throughout the whole book.

2.2.1 Brief historical overview

Quantitative social research was originally inspired by the spectacular progress of the natural sciences in the nineteenth century and therefore early social researchers set out to adopt what was called the 'scientific method' in their investigations. This method had been evolving in western thinking since about the mid-sixteenth century (the period of the Enlightenment) through the work of philosophers and scholars such as Copernicus, Bacon, Galilei, Kepler, Newton, Descartes, Hume, Comte, and Peirce. (For overviews, see Garratt and Li 2005; Jordan 2004.) Broadly speaking, the scientific method postulates three key stages in the research process: (a) observing a phenomenon or identifying a problem; (b) generating an initial hypothesis; and (c) testing the hypothesis by collecting and analysing empirical data using standardized procedures. Once the hypothesis has been successfully tested and further validated through replication, it becomes accepted as a scientific theory or law. Thus, the scientific method offered a tool to explore questions in an 'objective' manner, trying to minimize the influence of any researcher bias or prejudice, thereby resulting in what scholars believed was an accurate and reliable description of the world.

The scientific method was closely associated with numerical values and statistics, along the line of Nobel prize winner Lord Rutherford's famous maxim that any knowledge that one cannot measure numerically 'is a poor sort of knowledge'. Being a scientist was ultimately associated with empirically measuring one's subject matter and, preferably, conducting experiments. To serve the mathematical needs of the newly emerging social sciences, statistics became a fully-fledged subdiscipline of mathematics by the end of the nineteenth century. The contribution of one scholar in particular, Francis Galton, was significant in establishing quantitative data collection and analytical methods in psychology at the turn of the twentieth century: amongst other things, Galton initiated psychological testing, introduced the use of questionnaires and created the statistical concepts of regression and correlation.

The first half of the twentieth century saw major developments both in the scientific method (most notably through the work of Karl Popper) and in statistics (for example, by Spearman, Fisher, Neyman, and Pearson), leading to the increased use of quantitative methodology across the whole range of social disciplines. As a result of this progress, the social sciences achieved maturity and earned the reputation of being able to study human beings 'scientifically' both at the individual and the societal levels. Fuelled by the advances in psychometrics (a subdiscipline focusing on measurement in psychology), classical test theory, experimental design, survey research, questionnaire theory, and multivariate statistics, the middle of the twentieth century became dominated by quantitative methodology in the social sciences. This hegemony only started to change in the 1970s as a result of the challenges of qualitative research, leading to a restructuring of research methodology. Currently, in many areas of the social sciences we can see a peaceful coexistence of quantitative and qualitative methods.

In applied linguistics, according to Lazaraton (2005), the period between 1970–1985 saw a significant increase of quantitative research articles, which went hand in hand with the publication of several research methods texts in the 1980s, culminating in Hatch and Lazaraton's (1991) seminal *Research Manual*; this provided a very detailed summary of quantitative research and statistics, richly illustrated with published quantitative studies. Lazaraton (2005) reports on a survey of 524 empirical studies that appeared in four major applied linguistic journals between 1991 and 2001; the results show that as many as 86 per cent of the research papers were quantitative (while 13 per cent qualitative and 1 per cent mixed methods), which led Lazaraton to conclude that quantitative studies 'reign supreme' (p. 219) in our field.

Lazaraton (2005) also highlighted a major change taking place in research orientation in applied linguistics: while in the 1980s there was an 'unquestioned reliance' on quasi-experimental studies, the past 15 years have brought along a broader, multidisciplinary perspective on research methodology, with an increasing number of alternative, often qualitative, designs employed. In an overview of research methods in the field, Duff (2002) also highlights the growing sophistication of quantitative studies in the 1990s, both in terms of their design and their psychometric refinement, which confirms Lazaraton's (2000) conclusion that there has been a 'coming of age' of quantitative research in applied linguistics.

2.2.2 Main characteristics of quantitative research

As we saw in the previous section, quantitative social research had grown out of the desire to emulate the 'objective' procedures in the natural sciences. However, along with many others, Shavelson and Towne (2002) point out that even though several aspects of the 'scientific method' appear to be transferable to social research, there are also some fundamental differences between the natural and social sciences. The most obvious of these is that, unlike atoms or molecules, people show variation over time and across social and cultural contexts. They also display within-individual variation and therefore even if they are placed under similar conditions, their reaction will vary widely, which is something natural scientists working with atoms and molecules do not have to worry about (Dörnyei 2005). Therefore, while quantitative methods in the social sciences by and large align with the general principles of the 'scientific method', they also show certain distinctive features.

Section 2.1 already listed some of the characteristic features of quantitative research. The following summary reiterates those and adds some further characteristics that have not been mentioned before.

- *Using numbers* The single most important feature of quantitative research is, naturally, that it is centred around numbers. This both opens up a range of possibilities and sets some limitations for researchers. Numbers are powerful, as attested to by the discipline of mathematics. Yet numbers are also rather powerless in themselves because in research contexts they do not mean anything without contextual 'backing': they are faceless and meaningless unless we specify exactly the category that we use the specific number for, and also the different values within the variable (i.e. knowing, what '1' or '6' means in a particular category). Thus, for numbers to work, we need precise definitions of the content and the boundaries of the variables we use and we also need exact descriptors for the range of values that are allowed within the variable. However, if we manage to provide all this, numbers *do* work and the development of quantitative research over the last century has been frankly astounding. The level of sophistication that quantitative data analysis has reached is awesome in every sense of the word.

- *A priori categorization* Because the use of numbers already dominates the data collection phase, the work required to specify the categories and values needs to be done *prior to* the actual study. (See also Section 2.1.2.) If, for example, respondents are asked to encircle figures in a questionnaire item, they have to know exactly what those figures represent, and in order to make sure that each respondent gives their numerical answer based on the same understanding, the definitions and value descriptors need to be unambiguous. To achieve this takes time and effort, and although (as will be discussed later) most phases of qualitative research tend to be more labour-intensive than those of quantitative research, the preparation phase is an exception: whereas in a qualitative interview study one can start the first interview soon after the instigation of the project, in a quantitative study several weeks and often months of meticulous preparation and piloting are usually needed before the finalized instrument can be administered. Luckily, after the administration of the instrument, things speed up and even in a large-scale quantitative study it is not unheard of to have preliminary results within a week after the data has been collected. This would be impossible in qualitative research.
- *Variables rather than cases* As discussed in Section 2.1.3, quantitative researchers are less interested in individuals than in the common features of groups of people. Therefore, in contrast to the QUAL emphasis on the individual case, QUAN research is centred around the study of *variables* that capture these common features and which are quantified by counting, scaling, or by assigning values to categorical data. (See Sections 9.2.1 and 9.4.1.) All the various quantitative methods are aimed at identifying the relationships between variables by measuring them and often also manipulating them (as in experimental studies; see Section 5.3); Hammersley and Atkinson (1995) regard the quest for specifying the relationships amongst variables as the defining feature of quantitative social research.
- *Statistics and the language of statistics* Section 2.1.4 discussed the significance of statistics in quantitative research. This is undoubtedly the most salient QUAN feature—as we will see in Chapter 9, statistical analyses can range from calculating the average (or as it is referred to in statistics, the ‘mean’) of several figures on a pocket calculator to running complex multivariate analyses on a computer. Because of the close link of quantitative research and statistics, much of the statistical terminology has become part

of the QUAN vocabulary, and the resulting unique QUAN language adds further power to the quantitative paradigm. No wonder that qualitative researchers have gone to great lengths to try and replace some of the QUAN research terminology with QUAL-specific language (for example, when defining the QUAL quality criteria—see Section 3.1).

- *Standardized procedures to assess objective reality* Sections 2.1.3 and 2.1.4 highlighted the general QUAN aspiration of eliminating any individual-based subjectivity from the various phases of the research process by developing systematic canons and rules for every facet of data collection and analysis. Quantitative methodology has indeed gone a long way towards standardizing research procedures to ensure that they remain stable across investigators and subjects. This independence of idiosyncratic human variability and bias has been equated with ‘objectivity’ by quantitative researchers and the results accumulated through such procedures are thought to describe the objective reality that is ‘out there’, independent of the researcher’s subjective perceptions. Of course, as Bachman (2004a) points out, this stance is based on the assumption that there actually exists an objective reality, so that when different researchers observe the same phenomenon using standardized measures, their findings will show agreement and convergence.
- *Quest for generalizability and universal laws* Numbers, variables, standardized procedures, statistics, and scientific reasoning are all part of the ultimate QUAN quest for facts that are generalizable beyond the particular and add up to wide-ranging, ideally universal, laws. Whether such laws actually exist with regard to the social behaviour of humans, and if they do, how universal they are, are fundamental ideological questions that go beyond the scope of this book.

2.2.3 Strengths and weaknesses of quantitative research

The strengths of quantitative research are manifold and most have been discussed in the previous sections. QUAN proponents usually emphasize that at its best the quantitative inquiry is systematic, rigorous, focused, and tightly controlled, involving precise measurement and producing reliable and replicable data that is generalizable to other contexts. The statistical analytical apparatus is refined and far-reaching and it also offers some in-built quality checks and indices (such as statistical significance) that help readers to decide on the validity of quantitative findings. From a practical perspective, even with the longer preparation period discussed earlier, the research process is relatively quick and offers good value for money, particularly because the data analysis can be done using statistical computer software. Finally, quantitative findings tend to enjoy a universally high reputation with almost any audience or stakeholder group.

The downside of quantitative methods is that they average out responses across the whole observed group of participants, and by working with concepts of averages it is impossible to do justice to the subjective variety of an individual life. Similar scores can result from quite different underlying processes, and quantitative methods are generally not very sensitive in uncovering the reasons for particular observations or the dynamics underlying the examined situation or phenomenon. That is, the general exploratory capacity of quantitative research is rather limited. Because of these shortcomings, qualitative researchers often view quantitative research as 'overly simplistic, decontextualized, reductionist in terms of its generalizations, and failing to capture the meanings that actors attach to their lives and circumstances' (Brannen 2005: 7).

Mixed-methods

Creswell, J. W. (2014). *Research design* (4th ed.). London: Sage Publications, Ltd.

Mixed Methods Procedures

How would you write a mixed methods procedure section for your proposal? Up until this point, we have considered collected quantitative data and qualitative data. We have not discussed “mixing” or combining the two forms of data in a study. We can start with the assumption that both forms of data provide different types of information (open-ended data in the case of qualitative and closed-ended data in the case of quantitative). If we further assume that each type of data collection has both limitations and strengths, we can consider how the strengths can be combined to develop a stronger understanding of the research problem or questions (and, as well, overcome the limitations of each). This “mixing” or blending of data, it can be argued, provides a stronger understanding of the problem or question than either by itself. This idea is at the core of a reasonably new method called “mixed methods research.”

Conveying the nature of mixed methods research and what it is begins a good mixed methods procedure. Begin with the assumption that mixed methods is a new methodology in research and that the readers need to be educated as to the basic intent and definition of the design, the reasons for choosing the procedure, and the value it will lend to a study. Then, decide on a mixed methods design to use. There are many from which to choose and consider the different possibilities and decide which one is best for the proposed study. With this choice in hand, discuss the data collection, the data analysis, and the data interpretation and validation procedures within the context of the design. Finally, end with a discussion of potential ethical issues that need to be anticipated in the study, and suggest an outline for writing the final study. These are all standard methods procedures, but they are framed in this chapter as they apply to mixed methods research. Table 10.1 shows a checklist of the mixed methods procedures addressed in this chapter.

Table 10.1 A Checklist of Questions for Designing a Mixed Methods Procedure

_____	Is a basic definition of mixed methods research provided?
_____	Are the reasons given for using both quantitative and qualitative data?
_____	Does the reader have a sense for the potential use of mixed methods research?
_____	Are the criteria identified for choosing a mixed methods design?
_____	Is the mixed methods design identified?
_____	Is a visual model presented that illustrates the research strategy?
_____	Is the proper notation used in presenting the visual model?
_____	Are procedures of data collection and analysis mentioned as they relate to the chosen design?
_____	Are the sampling strategies for both quantitative and qualitative data collection mentioned for the design?
_____	Are specific data analysis procedures indicated for the design?
_____	Are the procedures for validation mentioned for the design and for the quantitative and qualitative research?
_____	Is the narrative structure of the final dissertation or thesis mentioned, and does it relate to the type of mixed methods design being used?

COMPONENTS OF MIXED METHODS PROCEDURES

Mixed methods research has evolved into a set of procedures that proposal developers can use in planning a mixed methods study. In 2003, the *Handbook of Mixed Methods in the Social and Behavior Sciences* (Tashakkori & Teddlie, 2003) was published (and later added to in a second edition, see Tashakkori & Teddlie, 2010), providing a comprehensive overview of this approach. Now several journals emphasize mixed methods research, such as the *Journal of Mixed Methods Research*, *Quality and Quantity*, *Field Methods*, and the *International Journal of Multiple Research Approaches* while numerous others actively encourage this form of inquiry (e.g., *International Journal of Social Research Methodology*, *Qualitative Health Research*, *Annals of Family Medicine*). Numerous published research studies have incorporated mixed methods research in the social and human sciences in diverse fields such as occupational therapy (Lysack & Krefting, 1994), interpersonal communication (Boneva, Kraut, & Frohlich, 2001), AIDS prevention (Janz et al., 1996), dementia caregiving (Weitzman & Levkoff, 2000), occupational health (Ames, Duke, Moore, & Cunradi, 2009), mental health (Rogers, Day,

Randall, & Bentall, 2003), and in middle school science (Houtz, 1995). New books arrive each year solely devoted to mixed methods research (Bryman, 2006; Creswell & Plano Clark, 2011; Greene, 2007; Morse & Niehaus, 2009; Plano Clark & Creswell, 2008; Tashakkori & Teddlie, 1998, 2010; Teddlie & Tashakkori, 2009).

Describe Mixed Methods Research

Because mixed methods research is relatively new in the social and human sciences as a distinct research approach, it is useful to convey a basic definition and description of the approach in a method section of a proposal. This might include the following:

- Begin by defining mixed methods. Recall the definition provided in Chapter 1. Elements in this definition can now be enumerated so that a reader has a complete set of core characteristics that describe mixed methods (see a more expanded view of defining mixed methods research in Johnson, Onwuegbuzie, & Turner, 2007):
 - It involves the collection of both qualitative (open-ended) and quantitative (closed-ended) data in response to research questions or hypotheses.
 - It includes the analysis of both forms of data.
 - The procedures for both qualitative and quantitative data collection and analysis need to be conducted rigorously (e.g., adequate sampling, sources of information, data analysis steps).
 - The two forms of data are integrated in the design analysis through merging the data, connecting the data, or embedding the data.
 - These procedures are incorporated into a distinct mixed methods design that also includes the timing of the data collection (concurrent or sequential) as well as the emphasis (equal or unequal) for each database.
 - These procedures can also be informed by a philosophical worldview or a theory (see Chapter 3).
- Discuss that many different terms are used for this approach, such as *integrating*, *synthesis*, *quantitative and qualitative methods*, *multimethod*, and *mixed methodology* but that recent writings tend to use the term *mixed methods* (Bryman, 2006; Tashakkori & Teddlie, 2010).
- Educate the reader about the background of mixed methods by reviewing briefly this history of this approach to research. It can be seen as a new methodology originating around the late 1980s and early 1990s based on work from individuals in diverse fields such as evaluation, education, management, sociology, and health sciences. It has gone through several periods of development including the formative stage.

the philosophical debates, the procedural developments, and more recently reflective positions (noting controversies and debates) and expansion into different disciplines and into many countries throughout the world. Several texts outline these developmental phases (e.g., Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009). This section could also include a brief discussion about the importance or rise of mixed methods today through such indicators of federal funding initiatives, through dissertations, and through the discipline-specific discussions about mixed methods found in journals across the social and health sciences (see Creswell, 2010, 2011).

- Follow this section with statements about the value and rationale for the choice of mixed methods as an approach for the dissertation or thesis project. At a *general level*, mixed methods is chosen because of its strength of drawing on both qualitative and quantitative research and minimizing the limitations of both approaches. At a *practical level*, mixed methods provides a sophisticated, complex approach to research that appeals to those on the forefront of new research procedures. It also can be an ideal approach if the researcher has access to both quantitative and qualitative data. At a *procedural level*, it is a useful strategy to have a more complete understanding of research problems/questions, such as the following:

- Comparing different perspectives drawn from quantitative and qualitative data
- Explaining quantitative results with a qualitative follow-up data collection and analysis
- Developing better measurement instruments by first collecting and analyzing qualitative data and then administering the instruments to a sample
- Understanding experimental results by incorporating the perspectives of individuals
- Developing a more complete understanding of changes needed for a marginalized group through the combination of qualitative and quantitative data
- Having a better understanding the need for and impact of an intervention program through collecting both quantitative and qualitative data over time

- Indicate the type of mixed methods design that will be used in the study and the rationale for choosing it. A detailed discussion of the primary strategies available will be discussed shortly. Include a figure or diagram of these procedures.

- Note the challenges this form of research poses for the inquirer. These include the need for extensive data collection, the time-intensive nature of analyzing both qualitative and quantitative data, and the

requirement for the researcher to be familiar with both quantitative and qualitative forms of research. The complexity of the design also calls for clear, visual models to understand the details and the flow of research activities in this design.

TYPES OF MIXED METHODS DESIGNS

There have been several typologies for classifying and identifying types of mixed methods strategies that proposal developers might use in their proposed mixed methods study. Creswell and Plano Clark (2011) identified several classification systems drawn from the fields of evaluation, nursing, public health, education policy and research, and social and behavioral research. In these classifications, authors used diverse terms for their types of designs, and a substantial amount of overlap of types existed in the typologies. For purposes of this discussion, I will identify and discuss the *three basic mixed methods* designs (as shown in Figures 10.1 and 10.2) and then briefly mention more advanced strategies that incorporate these three basic forms. Each approach will be discussed in terms of a description of the design, the forms of data collection and data analysis, interpretation, and validity challenges.

Convergent Parallel Mixed Methods Design

Description of the design. The convergent mixed methods approach is probably the most familiar of the basic and advanced mixed methods strategies. Researchers new to mixed methods typically first think of this approach because they feel that mixed methods only consists of combining the quantitative and qualitative data. In this approach, a researcher collects both quantitative and qualitative data, analyzes them separately, and then compares the results to see if the findings confirm or disconfirm each other (see Figure 10.1). The key assumption of this approach is that both qualitative and quantitative data provide different types of information—often detailed views of participants qualitatively and scores on instruments quantitatively—and together they yield results that should be the same. It builds off the historic concept of the multimethod, multitrait idea from Campbell and Fiske (1959), who felt that a psychological trait could best be understood by gathering different forms of data. Although the Campbell and Fiske conceptualization included only quantitative data, the mixed methods researchers extended the idea to include the collection of both quantitative and qualitative data.

Data collection. The qualitative data can assume any of the forms discussed in Chapter 8, such as interviews, observations, documents, and

Figure 10.1 Three Basic Mixed Methods Designs

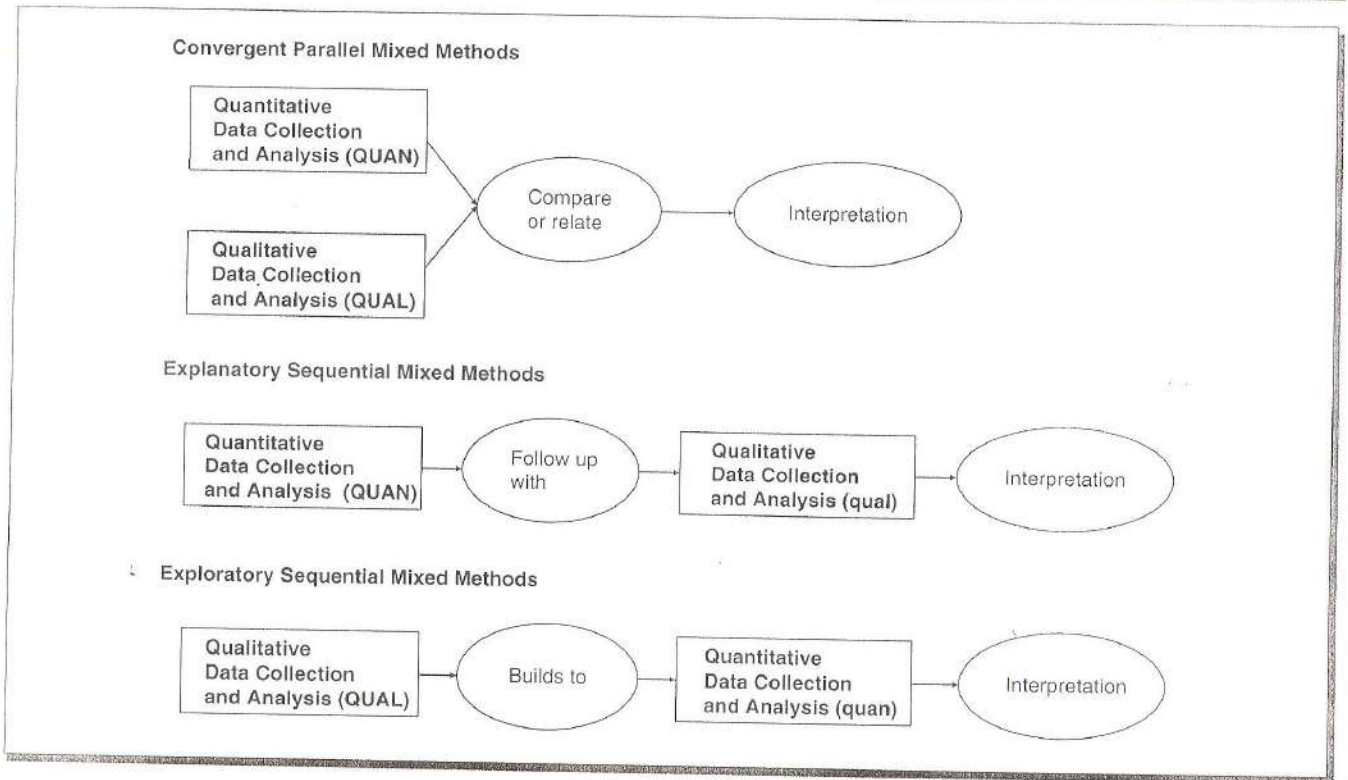
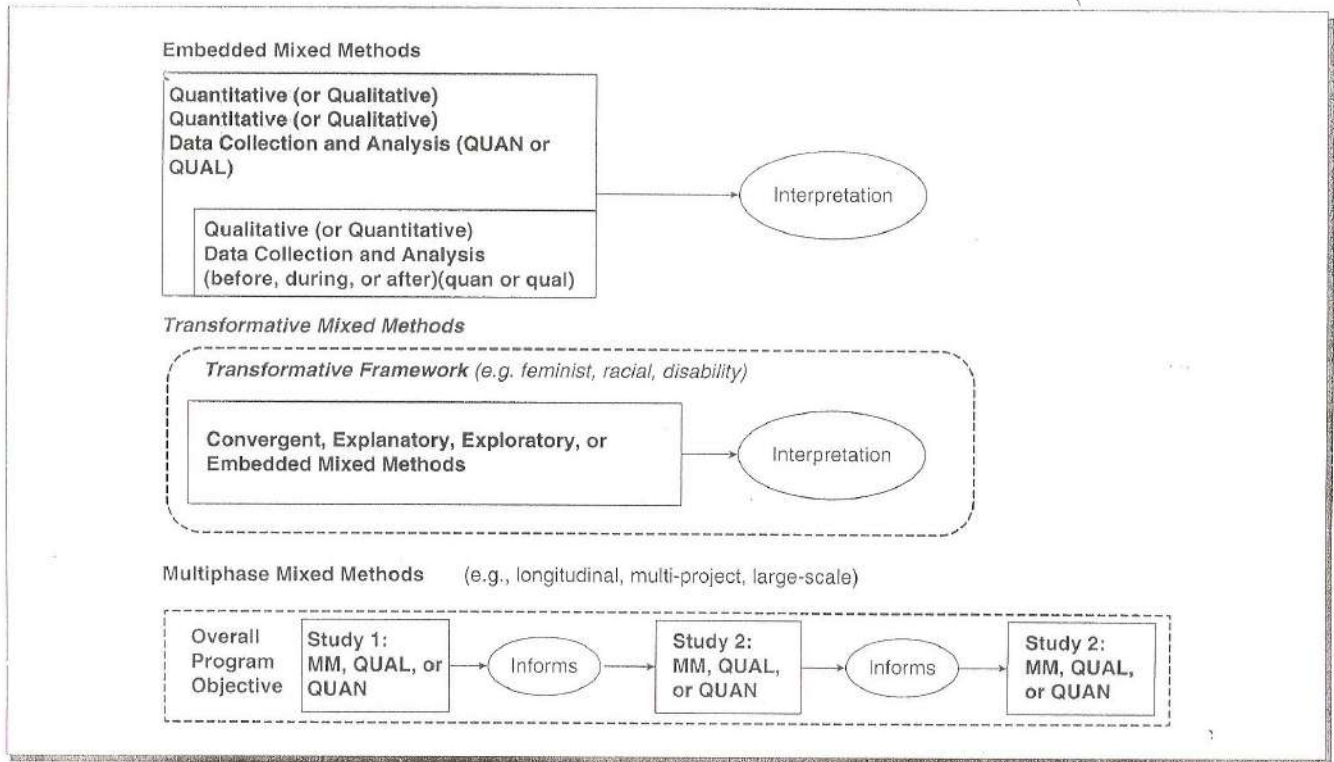


Figure 10.2 Advanced Mixed Methods Designs



records. The qualitative data can be instrument data, observational checklists, or numeric records, such as census data, as discussed in Chapter 7. The key idea with this design is to collect both forms of data using the *same or parallel variables, constructs, or concepts*. In other words, if the concept of self-esteem is being measured quantitatively, the same concept is asked during the qualitative data collection process, such as in an open-ended interview. Another data collection issue is the sample size for both the qualitative and quantitative data collection process. Unquestionably, the data for the qualitative data collection will be smaller than that for the quantitative data collection. This is because the intent of data collection for qualitative data is to locate and obtain information from a small sample but to gather extensive information from this sample; whereas, in quantitative research, a large N is needed in order to conduct meaningful statistical tests. How is this inequality resolved in a convergent mixed methods design? Sometimes mixed methods researchers will collect information from the same number of individuals on both the qualitative and quantitative database. This means that the qualitative sample will be increased, and it will limit the amount of data collected from any one individual. Another approach would be to weight the qualitative cases so that they equal the N in the quantitative database. One other approach taken by some mixed methods researchers is not to consider the unequal sample sizes a problem. They would argue that the intent of qualitative and quantitative research differ (one to gain an in-depth perspective and the other, to generalize to a population) and that each provides an adequate count. Another issue in sampling is whether the individuals for the sample of qualitative participants should also be individuals in the quantitative sample. Typically, mixed methods researchers would include the sample of qualitative participants in the larger quantitative sample, because ultimately researchers make a comparison between the two databases and the more they are similar, the better the comparison.

Data analysis. The challenge in a convergent mixed methods design is how to actually converge or to merge the data. We know from a description of this design that the two databases are analyzed separately and then brought together. There are several ways to merge the two databases. The first approach is called a side-by-side comparison. These comparisons can be seen in the discussion sections of mixed methods studies. The researcher will first report the quantitative statistical results and then discuss the qualitative findings (e.g., themes) that either confirm or disconfirm the statistical results. Alternatively, the researcher might start with the qualitative findings and then compare them to the quantitative results. Mixed methods writers call this a side-by-side approach because the researcher makes the comparison within a discussion, presenting first one set of findings and then the other. A good example of this can be seen in the Classen and colleagues' (2007) study.

Researchers can also merge the two databases by changing qualitative codes or themes into quantitative variables and then combining the two quantitative databases—a procedure called data transformation. The researcher takes the qualitative themes or codes and counts them (and possibly groups them) to form quantitative measures. Some useful procedures that mixed methods researchers have used can be found in Onwuegbuzie and Leech (2006). A final procedure is to merge the two forms of data in a table or a graph. This is called a joint display of data, and it can take many different forms. It might be a table that arrays the themes on the horizontal axis and a categorical variable (e.g., different types of providers such as nurses, physician assistants, and doctors) on the vertical axis. It might be a table with key questions or concepts on the vertical axis and then two columns on the horizontal axis indicating qualitative responses and quantitative results to the concepts (Li, Marquart, & Zercher, 2000). The basic idea is for the researcher to jointly display both forms of data—effectively merging them—in a single visual.

Interpretation. The interpretation in the convergent approach is typically written into a discussion section of the study. Whereas the results section report on the findings from the analysis of both the quantitative and qualitative databases, the discussion section includes a report comparing the results from the two databases and notes whether there is convergence or divergence between the two sources of information. Typically the comparison does not yield a clean convergent or divergent situation, and the differences exist on a few concepts, themes, or scales. When divergence occurs, steps for follow-up exist. The researcher can state divergence as a limitation in the study without further follow-up. This approach represents a weak solution. Alternatively, mixed methods researchers can return to the analyses and further explore the databases, collect additional information to resolve the differences, or discuss the results from one of the databases as possibly limited (e.g., the constructs were not valid quantitatively or the qualitative themes did not match the open-ended questions).

Validity. Validity using the convergent approach should be based on establishing both quantitative validity (e.g., construct) and qualitative validity (e.g., triangulation) for each database. Is there a special form of mixed methods validity that needs to be addressed? There are certainly some potential threats to validity in using the convergent approach, and several of these have already been mentioned. Unequal sample sizes may provide less of a picture on the qualitative side than the larger N on the quantitative side. The use of different concepts or variables on both sides, quantitative and qualitative, may yield incomparable and difficult to merge findings. A lack of follow-up on conclusions when the scores and themes diverge also represents an invalid strategy of inquiry.

Explanatory Sequential Mixed Methods Design

Description of the design. The explanatory sequential mixed methods approach is a design in mixed methods that appeals to individuals with a strong quantitative background or from fields relatively new to qualitative approaches. It involves a two-phase project in which the researcher collects quantitative data in the first phase, analyzes the results, and then uses the results to plan (or build on to) the second, qualitative phase. The quantitative results typically inform the types of participants to be purposefully selected for the qualitative phase and the types of questions that will be asked of the participants. The overall intent of this design is to have the qualitative data help explain in more detail the initial quantitative results. A typical procedure might involve collecting survey data in the first phase, analyzing the data, and then following up with qualitative interviews to help explain the survey responses.

Data collection. The data collection proceeds in two distinct phases with rigorous quantitative sampling in the first phase and with purposeful sampling in the second, qualitative phase. One challenge in this strategy is to plan adequately what quantitative results to follow up on and what participants to gather qualitative data from in the second phase. The key idea is that the qualitative data collection builds directly on the quantitative results. The quantitative results that then are built on may be extreme or outlier cases, significant predictors, significant results relating variables, insignificant results, or even demographics. For example, when using demographics, the researcher could find in the initial quantitative phase that individuals in different socioeconomic levels respond differently to the dependent variables. Thus, the follow-up qualitatively may group respondents to the quantitative phase into different categories and conduct qualitative data collection with individuals representing each of the categories. Another challenge is whether the qualitative sample should be individuals that are in the initial quantitative sample. The answer to this question should be that they are the same individuals, because the intent of the design is to follow up the quantitative results and explore the results in more depth. The idea of explaining the mechanism—how the variables interact—in more depth through the qualitative follow-up is a key strength of this design.

Data analysis. The quantitative and the qualitative databases are analyzed separately in this approach. The quantitative results are then used to *plan* the qualitative follow-up. One important area is that the quantitative results cannot only inform the sampling procedure but it can also point toward the types of qualitative questions to ask participants in

the second phase. These questions, like all good qualitative research questions, are general and open-ended. Because analysis proceeds independently for each phase, this design is useful for student research and perhaps easier to accomplish (than the convergent design) because one database builds on the other and the data collection can be spaced out over time.

Interpretation. The mixed methods researcher interprets the follow up results in a discussion section of the study. This interpretation follows the form of first reporting the quantitative, first-phase results and then the qualitative, second phase results. However, this design then employs a third form of interpretation: how the qualitative findings help to explain the quantitative results. A common misstep at this point by beginning researchers is to merge the two databases. While this approach may be helpful, the intent of the design is to have the qualitative data help to provide more depth, more insight into the quantitative results. Accordingly, in the interpretation section, after the researcher presents the general quantitative and then qualitative results, a discussion should follow that specifies how the qualitative results help to expand or explain the quantitative results. Because the qualitative database questions narrows the scope of the quantitative questions, a direct comparison of the two databases (as in the convergent design) means an inadequate comparison of variables or concepts.

Validity. As with all mixed methods studies, the researcher needs to establish the validity of the scores from the quantitative measures and to discuss the validity of the qualitative findings. In the explanatory sequential mixed methods approach, additional validity concerns arise. The accuracy of the overall findings may be compromised because the researcher does not consider and weigh all of the options for following up on the quantitative results. Attention may focus only on personal demographics and overlook important explanations that need further understanding. The researcher may also contribute to invalidate results by drawing on different samples for each phase of the study. This minimizes the important of one phase building on the other. The sample size may also be inadequate on either quantitative side of the study or the qualitative side. These are a few of the challenges that need to be built into the planning process for a good explanatory sequential mixed methods study.

Exploratory Sequential Mixed Methods Design

Description of the design. If we reverse the explanatory sequential approach and start with a qualitative phase first followed by a quantitative phase, we have an exploratory sequential approach. An exploratory

sequential mixed methods is a design in which the researcher first begins by exploring with qualitative data and analysis and then uses the findings in a second quantitative phase. Like the explanatory sequential approach, the second database builds on the results of the initial database. The intent of the strategy is to develop better measurements with specific samples of populations and to see if data from a few individuals (in qualitative phase) can be generalized to a large sample of a population (in quantitative phase). For example, the researcher would first collect focus group data, analyze the results, develop an instrument based on the results, and then administer it to a sample of a population. In this case, there may not be adequate instruments measuring the concepts with the sample that the investigator wishes to study. In effect, the researcher employs a three-phase procedure with the first phase as exploratory, the second as instrument development, and the third as administering the instrument to a sample of a population.

Data collection. In this strategy, the data collection would occur in two phases with the initial qualitative data collection followed by the second quantitative data collection. The challenge is how to use the information from the initial phase in the second phase. Several options exist. The qualitative data analysis can be used to develop an instrument with good psychometric properties (i.e., validity, reliability). The qualitative data analysis will yield quotes, codes, and themes (see Chapter 8). The development of an instrument can proceed by using the quotes to write items for an instrument, the codes to develop variables that group the items, and themes that group the codes into scales. This is a useful procedure for moving from the qualitative data analysis to scale development. Scale development also needs to follow good procedures for instrument design, and the steps for this including such ideas as item discrimination, construct validity, and reliability estimates (see DeVellis, 2012). Developing a good psychometric instrument that fits the sample and population under study is not the only use of this design. A researcher can analyze the qualitative data to develop new variables, to identify the types of scales that might exist in current instruments or to form categories of information that will be explored further in a quantitative phase. The question arises if the sample for the qualitative phase is the same for the quantitative phase. This cannot be, because the qualitative sample is typically much smaller than a quantitative sample needed to generalize from a sample to a population. Sometimes mixed methods researchers will use entirely different samples for the qualitative and quantitative components of the study (unlike the explanatory sequential design). However, a good procedure is to draw both samples from the same population but make sure that the individuals for both samples are not the same. To have individuals help develop an instrument and then to survey them in the quantitative phase would introduce confounding factors into the study.

Data analysis. In this strategy the researcher analyzes the two databases separately and uses the findings from the initial exploratory database to build into quantitative measures. This means that the researcher needs to pay careful attention to the qualitative data analysis steps and determine what findings to build on. If, for example, the researcher uses grounded theory (see Chapter 9), the theoretical model generated may provide a model to be tested in the second, quantitative phase. A qualitative case study can yield different cases that become the focus on important variables in the second quantitative phase.

Interpretation. Researchers interpret the mixed methods results in a discussion section of a study. The order of interpretation is to first report the qualitative findings, the use of the qualitative results (e.g., the development of an instrument, the development of new quantitative measures), and then the quantitative results of the final phase of the study. It does not make sense to compare the two databases, because they are typically drawn from different samples (as noted above in the data collection discussion) and the intent of the strategy is to determine if the qualitative themes can be generalized to a larger sample.

Validity. Researchers using this strategy need to check for the validity of the qualitative data as well as the validity of the quantitative scores. Special validity concerns arise, however, in using this design that need to be anticipated by the proposal developer. One concern is that the researcher may not use appropriate steps to develop a good psychometric instrument. Developing a good instrument is not easy, and adequate steps need to be put in place. Another concern is that a researcher may develop an instrument or measures that do not take advantage of the richness of the qualitative findings. This occurs when the qualitative data lacks rigor or occurs simply at the theme level without the further data analysis steps associated with using one of the qualitative design-types, such as ethnography, grounded theory, or case study procedures. Finally, as previously mentioned, the sample in the qualitative phase should not be included in the quantitative phase as this will introduce undue duplication of responses. It is best to have the qualitative participants provide information for scale, instrument, or variable design but not to also be the individuals completing the follow-up instruments.

Chapter

29

Ethics in educational research

Lobby Ramathan, Lesleye Gange and Lester Brian Shava

Introduction

Research ethics have become a central issue in educational research and no research can be conducted without due regard to ethics. Regulatory frameworks and regulatory bodies have been established to manage and approve research ethics protocols. Hence, data gathering for an educational research project can only begin once ethical clearance has been sought, approved and a certificate of ethical clearance has been issued. For most research conducted in higher education, ethical clearance applications are managed and processed through dedicated structures within the institution.

Since research ethics are a central issue in educational research, this chapter will present an overview of the founding knowledge that inform ethical practices, the key issues that need to be considered in research ethics and the process of application for ethical clearance. This chapter will focus on the following:

- What is meant by research ethics?
- What are the key dilemmas in conducting educational research?
- What are some of the ethical issues in different approaches to research?
- What ethical considerations should be taken into account within a research project?

What are research ethics?

Ethics are closely associated with morals and involve embracing moral issues in the context of working with humans (Gregory 2003). Ethics have now evolved to include issues beyond humans, incorporating a respect for and conservation of the environment. Ethics are also located within human rights and democracy discourses. With respect to the latter, society has become sensitive to the idea that the rights of people should be protected, particularly those who are vulnerable. The rights of South African citizens are, for example, enshrined in the Bill of Rights of the Constitution of the Republic of South Africa, 1996.

According to Burgess (1989), ethical questions are the subject of interdisciplinary deliberations. Over the years, philosophers have examined ethical issues in abstract terms, whereas sociologists and psychologists have focused on extreme cases and research scandals to highlight ethical issues in research. In the contemporary world, ethics should be the concern of all researchers and they should have a critical awareness of potential ethical risks when performing research on an everyday basis. Broadly, there are three different perspectives on ethics:

1. **Ethics as a disposition** This perspective is derived from Aristotle's notion of virtues that a person possesses, such as justice, generosity and honesty. Ethics in this instance is a disposition.
2. **Ethics as a duty** This perspective is derived from Kant, and it focuses on the duty humans (as rational beings) have to act in ways that show respect to other human beings.
3. **Ethics as utilitarian** This perspective relates to guiding principles for ethical conduct that should benefit a majority of people.

All three of these perspectives are important and they should not be seen as mutually exclusive. Educational researchers should be aware of all of them; however, it is the latter one that dominates approaches to ethics within institutions where educational research is conducted.

The Oxford Dictionary defines ethics as: 'moral principles that govern a person's behaviour or the conducting of an activity [... or] the branch of knowledge that deals with moral principles' (<http://www.oxforddictionaries.com/definition/english/ethics>). This definition focuses on moral principles and guidelines for human behaviour. However, such definitions tell us very little about ethics related to the daily activities of researchers, teachers, learners and practitioners. In fact, the work of most educational researchers proceeds unnoticed, and it is only with hindsight that they become aware of decisions made that could have done harm in some way. Therefore, ethics in educational research should focus on creating awareness among researchers about how their daily decisions could potentially harm human beings and the environment.

Researchers who are representatives of powerful institutions, such as universities, can use their power negatively and exploit members of society who seemingly hold less powerful positions, such as those who are poor, women, people of colour, children and so on. It is therefore important for all researchers, particularly those who work directly with human beings, to carefully identify possible ethical risks and to take the necessary steps to reduce such risks. Of course, many ethical issues only emerge during the investigation and they cannot always be preempted. Moreover, ethical questions are not always clear-cut and are often controversial. Ethical standards also differ depending on the type of research that is conducted. However, an understanding of what research ethics entail, what the major ethical dilemmas in educational research are, and what ethical considerations should be taken

in consideration when conducting a research project would assist researchers in mitigating ethical risks

Key ethical dilemmas and how to overcome them

Burgess (1989) identified four ethical dilemmas that are relevant to educational research: research sponsorship, research relations, informed consent and data dissemination. These continue to remain key ethical dilemmas and concerns that should receive consideration by researchers.

Research sponsorship

A sponsor of research is any person or body that funds research or allows researchers access to data. Sponsors could be governments, national funding bodies such as the National Research Foundation (NRF), the corporate sector, private organisations or private individuals. Research sponsorship relates to the intervention of sponsors in research activities. It concerns the extent to which sponsors influence different aspects of the research process, such as the research questions posed and well as the findings of the research. Funders could play a gatekeeping role whereby they will only fund a research project if it meets their own requirements. They could also claim ownership of data and prevent the publication of findings.

There have not been many research scandals in educational research – or at least not many have been made public. However, there was one documented case worth mentioning. In Britain, Maurice Punch conducted research at Darlington Hall, an independent progressive school in the south-west of England. He had signed an agreement that his research would only be published if the chairman of the Trust of Darlington Hall provided written consent for the publication of the research. As a consequence, Punch had difficulties in publishing his research and it took a battle of 15 years before he could do so. This case raises issues concerning research sponsorship, confidentiality, identification, freedom to publish and the nature of professional standards (Punch 1986). In most cases ethical dilemmas can be mitigated by written agreements between sponsors and researchers, but the contents of such agreements must be carefully considered so that no harm is done to research participants and academic freedom is not unreasonably curtailed.

Research relations

This relates to the relationship between the researcher and the researched. Burgess (1989: 5) argues that research relations concern questions of access, power, harm, deception, secrecy and confidentiality and that all of these should be considered and resolved by the researcher. Most educational researchers are associated with universities and this produces a power differential when working with vulnerable groups in society such as women, children and those marginalised based on race, religion, sexual orientation, HIV/AIDS status and so on. It is therefore important

that researchers take care not to exploit vulnerable groups that they are researching and that they remain conscious of the effects that their positions as university-based researchers might have on the researched. Moreover, when negotiating access to settings, researchers should familiarise themselves with the protocols of communities such as religious communities and indigenous communities.

Ethical dilemmas related to research relations could be overcome through collaboration in participatory approaches to research whereby communities are able to participate in many aspects of the research process and where the benefits for both research participants and the researcher are negotiated.

Informed consent

Informed consent holds a key place in research ethics and concerns the voluntary consent of an individual to participate in research. The British Educational Research Association (BERA) (2011) points out that the first step in obtaining consent is for researchers to ensure that participants understand the process that they are engaging in, why their participation is required, who will use the research findings and how it will be reported. The researcher should also inform participants that they have the right to at any stage withdraw from participating in the research process without providing any reasons for doing so. In cases where cultures adopt a collective approach to consent, this needs to be respected by researchers. If research is done in public schools, then permission must be obtained from provincial departments of education (PDEs), and in the case of minors, the consent of parents or guardians is required. Universities ensure that the principle of informed consent is respected through including this as a criterion for granting ethical clearance. Ultimately the researcher has the responsibility to apply this principle. An area that does provide a challenge is when important information is obtained from research participants in informal conversations for which consent was not obtained.

Data dissemination

Data dissemination is also a key area where ethical considerations are involved including a range of aspects such as confidentiality, the extent to which data can be reported back and the extent to which research reports can be used by policy makers and in educational practice. In disseminating data, researchers should ensure that they accord participants the right to confidentiality and anonymity — unless the participants or their guardians have waived this right. One of the advantages of member-checking used in qualitative research is that it gives research participants an opportunity to comment on both interview transcripts and interpretations of interviews. This mitigates the possibility of misrepresentation of participants by researchers. Data security and the ethics around data dissemination are normally taken into consideration by ethics committees in universities as part of the ethical clearance process.

Ethics within different approaches to educational research

Before specifically discussing ethical issues that may arise due to certain approaches to research, some general points will be raised about the integrity of the research process. It is fundamental that researchers ensure the integrity of the entire research process, which means, among other things:

- that they ensure their research is trustworthy (valid and reliable)
- that their findings are based on evidence
- that their arguments can be justified
- that they follow acceptable guidelines for conducting research within the chosen research paradigm.

According to Howe and Moss, issues of integrity of data are salient ethical matters. They write 'For both quantitative and qualitative research studies, the integrity of the research is determined by the authenticity of data, proper data representation and political issues surrounding research findings' (1999: 29). If researchers do not ensure the integrity of their research, they can be guilty of misconduct should they bring research into disrepute in any way. BERA (2011: 10) identifies various actions that could result in researchers being guilty of misconduct, namely:

- falsifying research evidence or findings
- sensationalising findings in order to gain maximum exposure
- deliberately distorting findings by selectively publishing some aspects and not others
- criticising other researchers in a defamatory or unprofessional manner
- undertaking work for which there is a perceived conflict of interest or for personal gain
- undertaking work for which they are not qualified
- publishing work carried out with co-researchers as the basis of individual outputs without the agreement of the co-researchers
- using research for fraudulent or illegal purposes

The ethical considerations discussed earlier apply to all research conducted in education. But there are instances where particular research approaches or designs give rise to unique ethical dilemmas.

Firstly in the case of experimental or quasi-experimental designs, an intervention is introduced to an experimental group and not to a control group. Say, for example, a computer-mediated programme is introduced into a school to see whether it improves learners' performance in physical science. The programme is introduced to the experimental group whereas the control group continues with the normal lecture method which both groups received prior to the intervention. If, for example, the intervention results in a significant improvement in learners' achievement in physical science, then the control group would have been denied an important learning experience. Such a design would be unethical in educational research. There are

other designs that could be used in education, such as evaluation designs which do not require the use of a control. Evaluation designs might be less rigorous than experimental designs but ethically more sound for use in educational research.

Interpretive (qualitative) research – and in particular the ‘thick description’ that characterises this kind of research – presents its own challenges. One challenge is how accurately the narratives of participants are presented. Moreover, if these narratives are co-constructed with participants, the question arises as to who owns the data and how much power participants have to challenge and edit the data (Howe & Moses, 1999: 44). Another matter in qualitative research is the problem of anonymity. Even though the names of schools, teachers and learners are not divulged in qualitative studies, because the contexts of such studies are often described thickly, it is possible through such descriptions to identify research sites and participants. It is important that researchers reflect on these ethical challenges, mitigate the risks and openly acknowledge in their research reports the dilemmas which emerge in such studies.

In the case of action research, for example, researchers’ own reflections as part of the inquiry could impinge on others, such as when a person has the dual role of being both teacher and researcher (see Chapter 30 for more on action research). According to BERA, ‘dual roles may also introduce explicit tensions in areas such as confidentiality and must be addressed accordingly’ (2011: 5).

In summary, there are ethical matters that all researchers should take into consideration, but there are also particular ethical issues that certain research approaches or designs may have.

Domains of ethical consideration within a research project

There are various domains within the research process that require ethical consideration and that are subject to ethical clearance with an ethical clearance certificate number before commencement of the research process. This section of the chapter presents the domains of research that involve ethical considerations and discusses what is expected of researchers within these considerations.

Bearing in mind that research institutions are mandated to provide ethical clearance for most research projects conducted by researchers affiliated to the research institution, the requirements for obtaining such clearance may be different across institutions. The general process is that the research proposal is developed and accepted for scientific merit before ethical clearance is applied for. The approval of a research proposal is generally done by a faculty research board, a college research board or a university research committee and is peer-driven, meaning that peers who are experts in the research area will review the proposal for scientific rigour. (See Chapter 28 for details on writing a rigorous research proposal.)

Once the research proposal has been accepted, an ethical clearance application is made to the research ethics committee, normally facilitated through an application form processed through the faculty research office. It is not uncommon for the

research ethics committee to also review the scientific merits of the proposal in addition to the ethical clearance application. This is done to ensure that there are checks along the way to ensure high standards of ethics in research. Some institutions review the research proposal and ethical clearance applications simultaneously. The different ways of reviewing ethical clearance applications impact on the time it takes to award an ethical clearance certificate. Some processes take up to a month for ethical clearance approval, while some may take six months to a year. This means that the timeframe for the research may have to be adjusted and in certain cases this may cause substantial disruption to the research agenda.

There are also different levels of ethics consideration in research proposals. Some proposals may have few ethical issues, for example desktop research, literature studies or studies that do not involve humans or animals. Ethical clearance for these kinds of research is usually gained in a short amount of time. Some research proposals involve the collection of data from very sensitive participants (such as vulnerable children, people living in poor socio-economic conditions or mentally compromised individuals) or animals that are on the endangered species list. These proposals would require greater scrutiny for ethical standards that have been set globally and therefore may take up to a year to approve.

In designing a research agenda, the researcher must keep in mind the ethical issues that would need to be addressed and what processes would need to be followed in obtaining ethical clearance. Some institutions use coding systems to identify the different levels of ethical clearance that are required of a research proposal. Using a coded system may speed up the ethical clearance approval process for a research protocol (used synonymously with 'research proposal') where no humans or animals are involved in the data collection process.

For the purposes of this chapter, the domains of ethical clearance consideration include scientific validity, data management, informed consent, gatekeeper's consent, risk assessment and other considerations of ethics. These are discussed in the sections that follow.

Scientific validity of the research

This domain of ethics requires a review of the coherence within the research protocol. Specifically, it looks for alignment between research topic, research purpose (aims and objectives) and research questions, and that these elements cohere. Having established this alignment, the next process is to review the participants (sample and population) from whom data will be collected. The appropriateness of the participants and the process of sampling needs to be clearly set out so that there is an alignment between the information required for the answering of the research questions and the source of this information. Ethical issues arise when information is obtained from secondary sources without the consent of the primary target participant. Correctness, trustworthiness and biases are addressed through a review of who the participants are and how they are recruited into the data generation process.

The participant recruitment process (sampling process) needs to be clearly spelt out in the protocol. The sampling process has implications for the findings of the research project. For example, in extrapolation studies, it is important to use an appropriate probability sampling process (eg random sampling) in order to make generalisable statements about a population (eg teachers). For studies that seek to understand a particular phenomenon, perhaps a purposive sampling process would be most appropriate, as information-rich cases would provide the depth of information required for understanding the phenomenon under consideration. The ethical considerations associated with the selection of participants are that the most appropriate participants should be selected for the intention of the research agenda so that the findings are acceptable, defensible and not biased.

The scientific validity screening would also require the submission of the research instruments through which the data will be collected. For example, if a survey is intended, a questionnaire would be required with the ethical clearance application form. The questionnaire will be reviewed in terms of the nature of the questions that are being asked of the respondent, whether the questions align themselves to the research questions of the research project, and whether the questions refrain from being hurtful or have the potential to evoke emotional trauma in the participants. All data collection instruments that will be used in the study would have to be subjected to review. Examples of data collection instruments include questionnaires, validated test instruments and scales (eg psychological tests), interview schedules and observation schedules. A review of the questions in these instruments is done to evaluate their alignment to the research questions for the study and their potential effects on the participants.

Some participants may react adversely to some of the questions in the data collection instrument and these reactions may require counselling or medical support. Such reactions are a real possibility and can lead to harm to the participants and as such the researcher needs to anticipate these kinds of reactions and account for how he or she would support the participant in such situations. The support process to provide assistance to the participants needs to be clearly spelt out in the ethical clearance application so that judgements can be made about the nature of questions that will be asked by the researcher, the potential harm that these questions may cause the participant and the sufficiency of support afforded to the participants to minimise the potential harm.

Participants' rights and responsibilities in the research process

The identification and selection of participants in the research process raise issues of ethical concern. Participants who are vulnerable or who are not able to make informed decisions are cause for ethical concern. Working within a human rights discourse and its associated responsibility values means that participants need protection. The ethical requirement of protecting participants' rights is a central

issue in research ethics. Participants must know their rights and limitations within the research process. These rights include

- the right to full disclosure of the research intentions
- the right to full disclosure of the nature of the participants' involvement within the research design
- the right to full disclosure of the potential risks to the participants
- confidentiality of information provided by participants
- the ability to withdraw from the research process without any consequences to the participants

Full disclosure and the participants' ability to comprehend the nature and purpose of the research, as well as their own involvement in the research, are issues of key concern in the application for ethical clearance. Hence, the review panel for ethical clearance applications needs to know who the participants are, how they are selected and whether they can comprehend the research process in order to give formal consent to be a participant in the research process.

Special categories of participants have been identified as being vulnerable and therefore require more protection in the research process. These vulnerable groups of participants include, among others, children, persons who are intellectually or mentally impaired, persons who have experienced traumatic or stressful life circumstances, persons who are HIV positive, persons highly dependent on medical care and persons in dependent or unequal relationships. The ethical considerations when using these groups of participants revolve around

- the protection of the anonymity of respondents
- the confidentiality of the information provided by these participants
- the prevention of social stigmatisation
- the prevention of victimisation
- the support services that need to be put in place to support adverse reactions to participation

Therefore, in order to use these groups of participants, additional permission needs to be obtained. Such additional permission could be obtained from parents or caregivers of children, or institutional managers for intellectually or mentally impaired participants.

Data collection and data management

The ethics associated with data collection are twofold. First, the nature of data to be collected may raise ethical issues. These situations include

- collecting confidential data without the permission of participants
- the use of stimuli, tasks or procedures which may be experienced as stressful or unpleasant
- participants being required to commit acts which might diminish self-respect or cause embarrassment or regret
- research using any form of deception

If such data are required for the research project, then full justification is needed and an indication must be given of what steps will be taken to minimise the effects of such data on the participants

The second ethical consideration with data collection is the management of the data once collected. In the full disclosure of the research agenda and process, the researcher is obliged to indicate how the data will be managed once collected. For example

- Will the data be accessible to others?
- How will the anonymity of the data source be guaranteed?
- Where will the data be stored?
- Who will have access to the data?
- When will the data be disposed of?
- How will the data be disposed of?

The responses to these questions may influence participation in the research process and the participants have the right to refuse to participate in the process based on these responses

Gatekeeper permission and consent from participants

Access to research sites is a controlled activity. Researchers are not at liberty to enter a research site and conduct research without receiving permission to conduct the research. This is so for various reasons, including the need to prevent unauthorised disclosure of information and defamatory or reputational damage to the institution or organisation. The implications of such transgressions are enormous, especially within the context of a highly litigious society and of the social, economic and health concerns that it may raise. In order to access a research site, permission is needed from an authorised individual of an institution or an organisation. This is called gatekeeper's permission. In order to obtain gatekeeper's permission, the researcher needs to write formally to the authorised individual or office for such permission, giving full details of:

- the research agenda
- the nature of participation of the organisation or institution
- issues of disruption that may be experienced by the institution or organisation as a result of the research being conducted at the site
- the rights of the organisation or institution
- who the participants will be
- what kinds of information will be elicited from these participants or the organisation or institution
- how the data will be managed
- how the data will be used

The institution or organisation must be given the right to grant or decline permission for the use of its site for the research without any implications to them. The

gatekeeper's permission needs to acknowledge that they understand the nature of the research to be conducted at their site, their rights and the nature of the permission they are granting for the research to be conducted

Consent letters are participant-specific, meaning that each participant must consent to taking part in the research process with the understanding of his or her roles, responsibilities and rights within the research process. Each identified participant must be provided with a letter clearly indicating

- the research focus and purpose
- the process of data collection
- the management of the data
- the nature of the participant's involvement in the data collection process
- the implications of participation
- the protection of the participant's anonymity and rights including the right to refuse participation or further participation as the research unfolds without any consequences to him or her.

This information letter must include the contact details of the researcher, the supervisor of the research and the affiliated institution. These contact details are used for verification by the participant as well as to lodge any complaints or concerns or report any transgressions that may occur during the research process. This information letter must be handed to the participant for his or her reference. Accompanying the information letter is a consent form that the participant completes, signs and hands over to the researcher as a record of informed consent by the participant. This means that the information letter and the consent form must be on separate pages. The consent letter is a declaration that the participant understands the research process and his or her rights including the right to refuse participation or to withdraw from the study without any consequences.

Other considerations in the ethical process

Research is conducted to produce knowledge. Hence, the dissemination of research findings and its implications is a crucial step in the research process. The dissemination process is, however, subjected to ethical scrutiny. The process of disseminating the research findings among the research participants is an ethical obligation of the researcher. This ethical obligation is to maximise the benefit emanating from the research process. Hence, statements about the dissemination process are required in the ethical clearance application process.

Some research may propose or result in post-research interventions. In such cases, the process of post-research intervention must be indicated so that research findings are not thrust onto participants or communities without a participatory process. Then there are also other considerations, including impact analysis, the benefits or conditions of funds and funder biases in the research process.

Conclusion

Research ethics are crucial components of any research process. No research can be carried out without ethical clearance approval. This chapter set out to present some theoretical insights into research ethics, with a view to providing rationale for why research ethics are crucial to any research process.

In this chapter, some ethical dilemmas that researchers have been faced with were presented, with some suggestions on how to engage with these dilemmas. Ethical dilemmas are a common feature of research, and often unfold when data are being collected, when data are being organised and analysed, when research reports are being written and when the research is being disseminated. Where there are no clear guidelines on how to resolve these ethical dilemmas, consultation with experts and supervisors would be needed.

Ethical clearance application processes may differ across institutions. There are, however, some core issues and processes that need to be followed in making ethical clearance applications. This chapter presented insights on and an account of what is expected from applicants on these core issues. Ethical practice commences from the conceptualisation of the research process to beyond the dissemination of the research findings (sometimes decades after the research process was completed). Hence, researchers are cautioned to consider issues of ethics beyond just the confines and duration of the research project, as these could have latent implications.

Article sample 1

Critical Analysis of Sumekto's (2018) *Investigating the Influence of Think-Pair-Share Approach Toward Students' Reading Achievement*

INTRODUCTION

A study has been done by Sumekto's (2018) about the influence of the think-pair-share approach toward ninth-graders' reading achievement. The researcher conducts the data through a mixed-method under Classroom Action Research (CAR) design. Then, 35 participants participated in this study consisting of 20 females and 15 males of ninth-graders from public secondary school in Pandowoharjo. There are two research purposes of this study which are to find out the influence of the think-pair-share approach in ninth-graders' reading achievement and to find out whether the think-pair-share approach increases the ninth-grade students' reading performance or not. The result for the first research purpose shows that students' reading achievement is still the same, namely the lack of mastered vocabulary and details the meaning of the vocabularies in text. For the second research purpose, the result shows that the students' reading achievement indicated unsatisfactory results because the students entirely get a minimum passing grade of 60.00. In the following discussion sections, this paper aims to critique the study of Sumekto's research paper in terms of research paradigm and method, the ethical considerations of this study, strengths, and weaknesses, and also the suggestions to improve the research.

DISCUSSIONS

Analysis of Paradigm and Methods

In this study, the researcher uses a mixed-method under CAR design to collect the data from the participants. The researcher has a pragmatism paradigm in which he uses the think-pair-share approach to investigate the influence of using the approach towards students' reading achievement in the context of real learning in the classroom (Rorty, 1999 in Feilzer, 2009). The claim is supported by the fact that the researcher adopting qualitative methods to approach reality which is doing the observation with the CAR technique and seek understanding in depths about the use of think– pair–share approach which influences students' reading achievement.

Furthermore, the researcher uses mixed-method under CAR design in which he conducts observation and descriptive statistics to analyze the data collection. The researcher conducts a cyclical spiral namely planning, acting, observing, and reflecting (Riel, 2007 in Mertler, 2009). The researcher divided into 2 cycles with a time allocation of 2x45 minutes carried out in the first week and the second week of October. The method that is used by the researcher is suitable for this study because of some reasons. First, the researcher conducts observation which is a type of qualitative method (Pharm, 2014) in order to determine the effect that occurs on students' reading achievement when using the approach that he sparked. Secondly, the researcher uses descriptive statistics which is a type of quantitative method to find the mean of the grades (Nardi, 2018) using the results of multiple-choice tests and from these results will be identified whether there is an increase in reading performance against students or not. Additionally, the participants who participated in this research were enough.

Analysis of Ethical Considerations

Furthermore, the researcher uses ethical consideration which is the four basic principles in research ethics (Rogers & Kelly, 2011) but incompletely. The researcher uses 3 out of 4 basic principles namely beneficence, non-maleficence, and justice. First, the researchers state that the results of his study produce positive effects on students' reading by using a think-pair-share approach, one of which it might engage students' critical thinking. It is categorized as a beneficence principle in research ethics as stated in Orb, Laurel & Dianne (2001) that the researchers must be preventing harm and do good for participants. Second, the researcher does the non-maleficence principle. Seen from Sumekto's (2018) article, it is known that the researchers distribute the questions to the participants step by step and in no hurry. This ethical practice is supported by Rogers and Kelly (2011) that who described that by considering the non-maleficence principle, the researcher avoids doing any harm from participants. Third, the researcher applies the justice principle, proven when the researcher involves 20 females and 15 males then give the same questions and not discriminate. It means that the researcher does fairness and equality to the participants (Orb, Laurel, & Dianne, 2001).

Additionally, besides 3 out of 4 basic principles used by researchers, there are two other principles that are not used, namely confidentiality and autonomy. First, seen from Sumekto's (2018) article, he shows the name of the teacher and also the name of the school which is

being researched. That indicates that the researcher does not apply confidentiality. While, in the research setting, confidentiality is about private information which is an important thing to participants (Giordani, O'Reilly, Taylor, & Dogra, 2007). Second, the researcher doesn't apply autonomy. Orb, Laurel, & Dianne (2001) stated that the researcher needs to respect participants' rights such as to be informed about the study, free to decide whether the participants will participate in a study or not. This is proven in Sumekto's (2018) article that he does not mention in his paper that his participants were informed by using an informed consent form.

Analysis on Strengths and Weaknesses, and Suggestion to Improve the Research

There are 3 strengths and 3 weaknesses that I find this article. Therefore, I give suggestions to improve this research study. The strengths of this paper are, first, the methods that use are suitable for the questions. Second, the researcher uses 3 out of 4 basic principles in this study. Last, the participants that participate in this study were enough. On the other side, the weakness is, first, the researchers did not mention in his paper whether he use informed consent and informed consent form or not while doing the observation. Second, the researcher does not apply the Autonomy principle and Confidentiality principle while doing the research. Third, the information of the participants can be identified. Even though this research has some strengths, but the researcher needs to improve this research to prevent these weaknesses happens again. The suggestion is the researcher should write in his paper whether he uses the informed consent form or not so that the information in his paper is complete. If he does not write that in his paper, people who read the paper will assume that he does not use the informed consent form in his research. Moreover, Researchers should use pseudonyms in writing the name of the teacher and the name of the school institution so that no identifiable information occurs. As found in Allen and Wiles (2016) that pseudonyms not about the technical procedure but doing renaming has psychological meaning will not only be good for the participants or the content but also the research process.

CONCLUSION

In conclusion, some points need emphasis. First, the researcher uses the mixed-method under CAR design doing this research and uses the pragmatism paradigm to analyze the research. Second, the researcher uses 1) observation which is a qualitative method to answer "How does

think-pair-share approach influence the ninth-grade students' reading activity?" and 2) descriptive statistic which is a quantitative method to answer "Does think-pair-share approach increase the ninth-grade students' reading performance?". Third, the researcher applied 3 out of 4 basic principles in research ethics which are beneficence, non-maleficence, and justice. Last but not least, the researcher has strength in the method that he uses which suitable for the RQs and enough participants. But, the researcher still needs suggestions to improve this study. This research will be better if the researcher uses pseudonyms and also write on the paper about the information of using an informed consent form while researching to make the paper more complete, not misunderstanding for the readers, and not ambiguous.

REFERENCES

[References are purposely omitted]

Student essay sample 2

Critical Analysis on Subekti's (2018) "L2 Motivational Self-System and L2 Achievement: A Study of Indonesian EAP Learners"

INTRODUCTION

In this article, the researcher intended to find a relationship between L2 motivational self-system (L2MSS) of L2 learners together with their L2 learning experiences and their achievements. As what the researcher once stated that the studies using L2MSS in Indonesia are still rarely conducted. Thus, she aimed to conduct this study to advance the motivational study with L2MSS in Indonesia. The participants who were participated in this study were 56 students of English Biotechnology class in Indonesia. They participated in the study by filling some adapted questionnaires from the researcher. After the answers are kept, the result then showed that there is no significant relationship between L2 self-system and L2 learning experiences with the L2 achievements of the participants. The analysis on method and ethical consideration of the article, and a suggestion to improve will be explained in the following discussion sections.

DISCUSSIONS

Analysis on the research paradigms and methods

The researcher had a positivist paradigm in which she used a quantitative method in her research (Daniel, 2016). She contributed questionnaires to the participants for conducting her research. Furthermore, she investigated three research questions. The researcher likewise used three different approaches for each of them. The first was answered with a descriptive statistic. A descriptive statistic is designed to provide statistic pictures (Stangor, 2011 p.14). The second research question was conducted by using linear correlation formula since the purpose of it was to find the relationship between two variables (Stangor, 2011 p.14) namely; the L2MSS of the learners and the learners' achievements. The last research question was answered by using linear regression formula in which the researcher intended to find the effect of one variable to another variable (Stangor, 2011 p.168).

The method that the researcher used for her study was suitable because of several reasons. The first reason is the number of participants who participated in the research is enough which is 56 participants. Richie, Lewis, Elarn, Tennant, and Rahim (2014) in Sim, Saunders, Waterfield, and Kingstone (2018) stated that the minimum number of participants for quantitative research is 50. It is because, in quantitative research, the larger population enables for quantitative research to be generalised (Daniel, 2016). Moreover, the large population likewise will represent the relevance of the research (Daniel, 2016). The second reason is the researcher contributed the questionnaires for conducting her quantitative research. Questionnaire is one of the ways to conduct a quantitative research that shows the clarity of questions (Shone, 2013 p.48). The third reason is related to the nature of quantitative research. Williams (2007) stated that quantitative research requires numerical data. Moreover, it encompasses statistical and numerical data. In relation to that, the researcher used numerical data to support the clarity of the result in her research article.

Analysis on the ethical considerations

The researcher has applied some research ethics principles in the research that she was conducted. The first research ethics that the researcher applied was autonomy in which the researcher used informed consent to make sure that the participants were participating in her research voluntarily. Hence, they can cancel their participation whenever they need or want to (Fouka & Mantzourou, 2011). The second research ethics that she applied was justice in which the researcher did translate the questionnaire that she adapted from Taguchi et al's (2009). The questionnaire may be written in English, thus, she needed to translate the questionnaire into the participants' L1. Therefore, the participants would not experience a language barrier. Akaranga and Makau (2016) argued that the fairness of a research included collaborative effort as what the researcher did in her research study where she considered to translate the questionnaire into the participants' L1 to avoid some confusion and misunderstanding. The third research ethics that was applied was anonymity. It is about protecting the participants' identity to respect their dignity (Fouka & Mantzourou, 2011). The last research ethics that the researcher applied was beneficence. It is about avoiding a harmful action for the participants (Fouka & Mantzourou, 2011). In her research study, the researcher respected the participants' learning time, thus, she merely distributed the questionnaire in the last meeting of the semester.

Suggestions to improve the research/research paper

The researcher used quantitative method to conduct her research which means that the result of the findings can be generalised (Daniel, 2016). Yet, the researcher may be overstated about the title and the context. On the title, the researcher mentioned the word 'Indonesian' while in her research, the participants were just 56 people. According to Morse, 1991, the wide generalisation needs to have more than 250 participants as a sample size for a wider generalisation. Thus, the researcher may change the title that more represents the content or she may do the research with more participants.

CONCLUSION

The research article titled "L2 Motivational Self System and L2 Achievement: A Study of Indonesian EAP Learners" by Subekti, 2018 indicated to find a relationship between L2 motivational self-system (L2MSS) and the participants' L2 achievement. The participants who were participated in this research were 56 students of English Biotechnology class in Indonesia. In conducting the research, the researcher used quantitative method and the research paradigm that she had was a positivist paradigm (Daniel, 2016). She inquired three research questions and used three different approaches to carry out the results of the findings. Moreover, the researcher did not disregard the research principles. She applied four research ethics principles, namely autonomy, justice, anonymity, and beneficence. Since the researcher applied several research ethics principles, the research article may be said good overall. Yet, the researcher overstated her title. The participants were not enough to be generalised (Morse, 1991) since it was just 56 participants while she indicated her research to represent the Indonesian context. Hence, the researcher may conduct her research with a wider sample size for a wider generalisation or she may revise her title into the one that is more representative to the content she made.

REFERENCES

[References are purposely omitted]

Student essay sample 3

Critical Analysis on Yanto's and Nugraha's (2018) "Video viewing as a mediation of learning content-based vocabulary: Assisting students in understanding disciplinary vocabulary in context"

INTRODUCTION

This article is about the study that done by Yanto and Nugraha (2018) to find the effectiveness of video viewing to assist the students learning in specific vocabulary. The study took place in West Java in a private secondary Islamic boarding school. In this study, the researchers used action research with 30 students as the participants. The purposes of this study are the researchers want to find how far vocabulary self-collection strategy (VSS) and video viewing help the students in mastery specific vocabulary and the students' responses toward the used of VSS. The results show that the students have positive feedbacks and subjectively the students felt their vocabulary was improved. In the following discussion, this paper will explain further about the critique on some points, which are the research paradigm and method, ethical consideration, strength and weaknesses, and finally some suggestions to improve this research.

DISCUSSIONS

Analysis on the research paradigms and methods

In this article, the researchers used action research approach. In order to analyze and collect the data, the researchers used interview, students' reflective journals, and observation. From those type of data collections, the researchers could be categorized as interpretivism, since the researchers tend to explore on the participants personal experiences and the phenomenon which occur in the participants environment (Orb, Eisenhauer, & Wynaden, 2001; Goldkuhl, 2012). In order to answer the first research question, that the researchers want to see about how far VSS along with video viewing assist the students to develop in order to learn disciplinary vocabulary, based on the paradigm, the type of data collection are not suitable, since the data are based on personal view and experience (Cohen, Manion, & Morrison, 2007).

Besides that, on the using of action research as the approach that used by the researchers on this article, there is an important point which omitted by the researchers. Action research is conduct to reflect and evaluate the way of teaching in order to improve the teaching and learning activities which occur in the researcher' teaching context (Burns, 2010). Moreover, Burns (2010) further stated that researcher' reflection is one of the essential points in action research. Yet, in this article, the researchers not clearly mention about their reflection towards their research in order to indicate whether the action that they implement could be continued for further teaching process or not.

Analysis on the ethical considerations

However, about the ethical consideration, the researchers have presented a good practice of some points on research ethics. The first point is the used of informed consent to have permission from the participants and participants' guide. This is shows that the researchers really respect the rights of the participants whether they want to participate on the research or decline to join the research (Cohen, et al., 2007; Orb, et al., 2001). Moreover, the researchers also asked for permission when the researchers conducted semi-structured interview with the students. In doing the interview, to avoid the miss understanding or miss conception, the researchers used Indonesian language where the students speak well. In here, the researchers really show one of the research ethics that is non-maleficence where the needs of the participants come first and it should not harm the participants (Cohen, et al., 2007). Moreover, since action research is conduct for improving the teaching context (Burns, 2010), based on the findings in this article, it shows that the participants shows positive feedback toward the used of VSS and video viewing. In here the researchers also consider about one of the research ethics where the research should have benefit for the participants (Orb, et al., 2001).

Suggestions to improve the research/research paper

In this article, I have found the strength that could be a good example of practice and also some weaknesses that need to improve. The first weakness that I found in this article is the used of interview, students' reflective journals, and observation in order to view the development of the students regarding to the used of VSS and video viewing to assist students' mastery in disciplinary vocabulary. As mentioned earlier, this type data collection is to see deeper on the participants personal perspectives where it cannot be

an indicator to see the development of all students since the data remains unique (Orb, et al., 2001; Goldkuhl, 2012). Based on Cohen, et al., (2007), that will be better if the researchers use quantitative data collection where it provides numerical and statistical data and it also easier to track the development and how far the students have developed. Furthermore, in this research, the researchers used action research where this kind of approach is use to reflect, evaluate, and improve teaching context. Regarding to this, researchers' reflection towards their research is an important point since it will show how good or how relevant their action towards the context that they observe (Burns, 2010). Besides those weaknesses, the researchers have positive point on the ethical consideration. The researchers really pay attention to the autonomy of the participants and also decrease the possibility of harmful action to the participants.

CONCLUSION

To summarize, in Yanto's and Nugraha's (2018) article, there are some positive points that I want to emphasize. The first point is the used of informed consent and the non-maleficence aspect where the researchers really respect the participants' autonomy. Moreover, the used Indonesian language to interview students in order to avoid miss understanding could be considered as positive point since it would make the students feel more comfort while interviewed by the researchers (Cohen, et al., 2007; Orb, et al., 2001). Yet, this article still has some weaknesses on the use of data collection and the approach that need to improve in future research.

REFERENCES

[References are purposely omitted]

Student essay sample 4

Critical Analysis on Yanto's and Nugraha's (2018) "Video viewing as a mediation of learning content-based vocabulary: Assisting students in understanding disciplinary vocabulary in context"

INTRODUCTION

A research has been done by Yanto and Nugraha (2018) about using video viewing as a mediation of learning content-based vocabulary for helping students in learning vocabulary in context. The researchers conducted their research on private secondary Islamic boarding school. The research was conducted through Classroom Research Analysis (CAR) approach and qualitative method. The researchers have two purposes in this research. First, to measure or gauge to what extent Video Self-collection Strategy (VSS) and video viewing can assist the students to improve their specialized vocabulary. Second, to know the students' responses of the use of VSS. To reach these two purposes, the researchers collected the data through observation, interview, and students' reflective journal. The result of this research show that VSS and video-viewing have considerable positive effect on helping students improve their vocabulary. Besides that, based on the students' personal journal the students also gave positive response to the use of VSS. In the following paragraphs, this paper will critique the research of Yanto and Nugraha in terms of research paradigm and method, the appraisals on ethical consideration, and suggestions to improve the research.

DISCUSSIONS

Analysis on the research paradigms and methods

In this article, the researchers used action research approach. In order to analyze and to collect the data, the researchers used interview, students' reflective journals, and observation. From those type of data collection, the researchers could be categorized as interpretivism, since the researchers tend to explore on the participants personal In Yanto's and Nugraha's paper, they did not mention directly the method that they used, but the methods that they used to collect the data were observation, interview, and students' reflective

journal. Observation, documents (textual or visual) analysis, interview (Individual or group) are method of collecting data of qualitative method (Gill, et al., 2008). By using qualitative method, the researchers automatically use interpretivism as the research paradigm. As Johnson and Onwuegbuzie (2013) stated that people who use qualitative method can be called interpretivist. Thus, it can be concluded that the researchers use qualitative method and interpretivism for this research.

Based on the research question, which aim to know the effectiveness of the method and the students' improvement, the method that the researchers use for this study is not quite fit. If the aim is to know the improvement and the response of the students, it will be better to use the data that can be generalized. Observation, documents analysis, and interview can give rich and thick description, yet because of this particularity the data is unique and cannot be generalized. The richness and the thickness of the data is one of the special traits from qualitative method (Johnson & Onwuegbuzie, 2013). It may be more compatible if the researchers use mixed method or quantitative method. Both of those two methods can give data that can be generalized (Johnson & Onwuegbuzie, 2013). The aspect that compatible between the qualitative method and this research is the number of participants which were thirty students.

Analysis on the ethical considerations

Furthermore, the researchers use four ethical considerations on this research which are autonomy, confidentiality, non-maleficence, and beneficence. First, the researchers did not force the students to become the participants for this research. The researchers even asked a permission from the students' parents. Thus, the participation of the students was voluntarily. It means that the research fulfills the autonomy aspect. It is supported by Vanclay, et al. (2013) stated that the participants should have freedom to choose whether they want to join the research or not. Besides giving the students freedom to choose, the confidentiality aspect of this research is good. The researchers did not mention very specific address or names. The researchers need a permission if they want to publish participants' information. In this regard, the researchers can use pseudonym to protect the information (Houghton, et al., 2010). Another things are the researchers use mother tongue (Indonesia) to interview the students, so there is no misunderstanding or misinformation (Cohen, et al., 2007). This is fulfilling the non-maleficence aspect which is about the protection of the participants. Based on the

students' reflective journal, it was found that the students claimed that they got some benefits from the participation of this research. A research should have benefits for the participant (Orb, et al., 2001). It is show that the researchers consider the aspect of beneficence.

Suggestions to improve the research/research paper

Regarding to this research, there are some suggestions to improve this study. First, the researchers should think about the compatibility between the research question and the method. The research question of this research aim to measure the improvement of the students and see how they respond to the method. The answer for those research questions may be will be more valid if it can be generalized. Yet, the methods that the researchers use to collect the data are observation, documents analysis, and interview. The result of those method is the answer that cannot be generalized, so it is not convincing enough. Thus, the researchers may use quantitative method or mixed method for this kind of research question.

CONCLUSION

To sum up, there are some points need to emphasized. First, the researchers use interpretivism paradigm to analyze the effectiveness of video-viewing as a mediation in learning specialized vocabulary. Second, the researchers use qualitative method to gather the data and answer the two research questions. Third, the researchers use three ethical considerations, which are autonomy, confidentiality, and non-maleficence. Last but not least, the researchers have done very well on ethical consideration aspect. But, a suggestion is still needed. Instead of using qualitative method, it is better to use quantitative or mixed method for this research.

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[References are purposely omitted]

Student essay sample 5

Critical Analysis of Lo's (2018) *The ESL Teachers' Willingness to Communicate in English*

Introduction

A study has been done by Lo's (2018) about willingness to communicate (WTC) using English among Malaysian teachers regard to gender and school locations. The researcher conducts the data through quantitative method with 250 participants of Malaysian teachers from Johor. There are two research purposes of this study which are to measure the ESL Malaysian ESL teachers' WTC in English and to find out whether there is significant difference among ESL teachers in Malaysian regard to gender and school locations. The result from this study shows that the female participants are more willing to communicate rather than the male participants. For the second research purpose, the result shows that there are no significant differences between WTC in English and school locations. In the following discussion sections, this paper aims to critique the study of Lo's research paper in terms of research paradigm and method, the appraisals on the ethical consideration, and suggestions to improve the research.

Discussions

a. Analysis on the research paradigm and method

In doing the research, the researcher uses quantitative method to gather the data from the participants. In this study, the researcher investigates two research questions. Based on the questions, the number of the participants, and the method, the researcher tries to see the objective reality. It is categorized as positivism paradigm (Kaboub, 2008). Every researcher who is using quantitative method is a positivist people, as they try to see the reality of a phenomenon and explain it using logical analysis (Kaboub, 2008; Neuman, 2000).

The method that is used by the researcher is suitable with this study because of some reasons. First, the researcher divides the questionnaire into two parts which are part A (Independent Variable): 20 items scaled designed by previous researcher and part B (Dependent variable): twenty items by using likert scales. Neuman (2000) stated that likert scale is used to indicate the participants' agreements and disagreements. It can be used to measure reliability in quantitative research (Brown, 2015). It means that the use of those two parts in Lo's (2018) are reliable. Secondly, in relation to the compatible method, the researcher uses correlation/association design to find the relationship of the ESL teachers' WTC in English regard to their gender and

school locations. Creswell (2012) in Creswell (2014) stated that this formula is used to show the relationship between two or more variables or more. Additionally, seen from the number of the participants who participated in this study, it shows that the number of participants is enough. This good number is supported by Delice (2003) who stated that 250 participants are good number of the sample size number of the participants in quantitative research.

b. Analysis on the ethical considerations

Furthermore, the researcher has done the ethical consideration but incomplete. Creswell (2014) mentioned that applying Institutional Review Board (IRB) in every college and university is necessary, because it provides the regulation of protecting human right in conducting a research. In other words, the IRB itself wants the researcher to protect its participants of the study in term of social, legal harm, physical, and psychological (Sieber, 1998 in Creswell, 2014). In responding to notice this regulation, the researcher must give an informed consent form for the participants so they can know what the study is and what the purpose of the study is. This argument is also supported by Neuman (2000) who stated informed consent form is important to be distributed to the participants as it provides specific information about the study. Therefore, the participants will know why they are being asked to participate in the research, so they can make decision whether or not they want to participate. However, the fact shows that, the researcher does not distribute anything about consent form. The researcher just tells the purpose of the study through asking a permission from the gatekeepers in Johor School. According to Creswell (2014), obtaining necessary permission is one of important things before doing a research. Despite the researcher does not distribute the consent form, at least the researcher has obtained necessary permission through asking permission to the gatekeepers.

Furthermore, there are three research ethics that the researcher applies which are autonomy, beneficence, and non-maleficence. First, the researcher does not force the participants to be involved in the research. It is categorized as autonomy principle in research ethics as stated in Vanclay, Bailer & Taylor (2013) that the researcher must respect the participants' autonomy. As the evidence, the researcher gives freedom to the participants by asking permission to the gatekeepers. In this case, the researcher does not want the participants to feel coerced to participate while conducting the research. It can be seen when the researcher only gets returned 250 responses out of 320 distributed questionnaires. Second, the researcher does the beneficence. Seen from Lo's (2018) article, it is known that the author tells the purpose of the study although there is no consent form. This ethical practice is supported by Akaranga and Makau (2016) who described that every researcher must tell all of information of the study. By doing so, the researcher minimizes risk (e.g. deception which is presenting of misinformation

about the study to the participants) and maximizes benefits to the participants. Third, the researcher applies non-maleficence because the researcher does not harm the participants. Akaranga and Makau (2016) stated that non-maleficence itself focuses on avoiding harm from participants. For instance, the researcher distributes 320 questionnaires; however, there are only 250 responses from the participants. It means that the researcher does not force the participants (Neuman, 2000) to collect the total number of questionnaire that is given previously.

c. Suggestions to improve the research paper.

Regarding to this research, there are some suggestions for the researcher to be improved. First, the researcher must consider the role of research ethics. A good research has to be conducted based on its ethics. For instance, the important of using consent form. In doing a research, the researcher should distribute consent form to the participants because it is a way of getting permission from participants and to tell information about the purpose of the study (Creswell, 2014). By doing so, the researcher shows that there is not coercion to the participants. Yet, it will be the participants' willingness to decide whether or not they want to involve in this research. Besides, from the consent form, the researcher can also get some deeper additional information about participants' personal information. Thus, the researcher can contact the participants for the further information related to the research.

Conclusion

To sum up, this paper critiques three things in relation to research paradigm, methods and the ethical considerations. As has mentioned earlier, Lo's article uses positivism paradigm and quantitative method to see the reality (Kaboub, 2008). In order to see the relationship of the ESL teachers' WTC in English regard to their gender and school locations, the researcher uses correlation/association to get the result of it. Moreover, the researcher has incompletely done research ethics which is distributing consent form. It is definitely good that the researcher obtained necessary permission by asking the gatekeepers, but not the consent form. Whereas, Neuman (2000) has pointed out that consent form must be distributed to the participants. Thus, in order to cover up the weakness of Lo's article, it is better for the future research, the researcher should have to make a consent form and distribute it to the participants.

References

[References are purposely omitted]

Student essay sample 6

Critical Analysis on Subekti's (2017) "The Use of a Commercial Textbook in English 1 Course at a University in South Korea"

INTRODUCTION

In this article, Subekti (2017) intends to evaluate the use of the commercial textbook in English 1 course at a University in South Korea. The participants that participate are a native teacher in one of Korean University and two other teachers. As it is a perspective journal, the participants are treated as relevant data through their viewpoint about the use of a commercial textbook in English 1 course. By doing this research, the researcher has two research questions: (1) To what extent is the use of a commercial textbook in English 1 course? and (2) How is the use of a commercial textbook in English 1 course at the university seen from the framework of a sound curriculum development? Those two research questions are answered by doing an interview and analyzing written-document. The English 1 course has five aims that are discussion skills, reading skills, study skills, critical thinking, and vocabulary. The result of this study shows that the course book only fulfil three out of five aims of the course goals. Based on the interview, the teachers also claim that the textbook does not facilitate learners to achieve all the course aims. In this paper further will be explained the research paradigm and method, ethical consideration, strengths and weakness, and suggestions to improve the research article.

DISCUSSIONS

Analyzis on Paradigm and Methods

In this study, the researcher is carried out interpretivism paradigm and qualitative methods to investigate the use of commercial textbook in English 1 course. Firstly, the researcher has interpretivism paradigm in which she attempts to gain a deeper understanding of the use of a commercial textbook in English 1 course and its complexity in its unique context instead of trying to generalize the understanding for the whole population (Creswell, 2007). The claim is supported by the fact that the researcher in this article is doing the direct interview with native teacher who is teaching in a Korean University, doing email-interview with two other teachers, and analyzing written-document of the textbook and course syllabus.

Furthermore the researcher uses qualitative method in which she conducts interview and written-document analysis. By doing the interview, she tries to understand and explore the individuals or groups attribute to a social or human problem, in this case, the use of a commercial textbook (Creswell, 2009; Thanh & Thanh, 2015). Furthermore, she combines interview and also written-document analysis which are parts of the qualitative method. This statement can be

supported by Bowen (2009) who stated that document analysis is often used in combination with other qualitative research methods as a combination of methodologies in the study of exploring and understanding social phenomena, in this case, the use of a commercial textbook in English course.

Analysis on Ethical Considerations

Furthermore, the researcher uses two ethical considerations which are confidentiality and voluntary participation. Firstly, the researcher covers the name of the university and also the name of the participants in the study. Kaiser (2009) stated that before the researcher publishes the study, he or she has cleaned the data set of the participants so that they cannot be identified by the readers. Secondly, the participants in this research are voluntary participation in the study. As all the opinions of the participants are put in the research article, and it already published, it means that all the participants are willing to participate in the research. It is supported by Vanclay and Baines and Taylor (2013) that stated participants have their own choice whether they want to participate in the study or not after they get the detail information about the concept of the study.

Analysis on Strengths and Weakness, and Suggestion to Improve The Research

There are two strengths and weakness that we find in this article. Therefore, we give suggestion to improve this research study. First of all, in this research article, we find that the strengths are the suitable method in the research and the researcher uses more than one method in the research. Related with the first strength, the researcher uses the interview method to answer RQ 1. This can be the strength of the research because the researcher interviews the teacher who teaches English 1 course in Korea. By doing an interview with this teachers, the result of the interview must be trustworthy because the researcher carries out this study with the expert of the field which is supported by Martnez-Mesa, et al. (2016). Moreover, the method that the researcher uses to answer the RQ 2 is also suitable because the researcher uses written-document analyzis to get deeper information about the textbook and also does an email interview to get the answer of RQ 2. It is the second strength because she uses more than one method to gain a deeper perspective in the study.

Even though this research has some strengths, but the researcher needs to improve on doing the interview. The suggestion is the researcher better to use Skype/Facetime to do the interview with two teacher colleague to answer RQ2 because it is better to be used. As it is found in (Stewart & Williams, 2005) and (Sullivan, 2012) in (Janghorban, Roudsari, Taghipour, 2014, p. 1). the researchers stated that "In using the web camera, the interaction will be comparable to the onsite equivalent for the presence of nonverbal and social cues". It means that by seeing the facial

expression and also the tone of the voice, we will get more clues about the issue related with the use of commercial textbook in English 1 course at a University in South Korea.

CONCLUSION

In conclusion, there are some points need to emphasis. First, the researcher uses the interpretivism paradigm to analyze the perspective of the teachers in using a commercial textbook in Korean University. Second, the researcher uses two qualitative methods to answer two research questions: 1) E-mail interview to answer "To what extent is the use of a commercial textbook in English 1 course?" and 2) E-mail interview and written-document analysis to answer "How is the use of a commercial textbook in English 1 course at the university seen from the framework of a sound curriculum development?". Third, the researcher applied two ethical considerations, which are confidentiality and voluntary participation. Last but not least, the researcher has strength in conducting the method because it is suitable for the purpose of the study. But, a suggestion is still needed. Instead of doing email interview it is better to use Skype interview.

REFERENCES

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Universitas Kristen Duta Wacana
Program Studi Pendidikan Bahasa Inggris

RENCANA PEMBELAJARAN SEMESTER

Mata Kuliah	Kode Mata Kuliah	Rumpun Mata Kuliah	Semester	Bobot(SKS)	Tanggal Penyusunan
Research Methodology in ELT	RS1013	Kemampuan Melakukan Penelitian dan Menyajikannya	5	3	28 Agustus 2020
Otorisasi	Dosen Pengembang RPS	Koordinator Rumpun Mata Kuliah			Ketua Prodi
	Adaninggar Septi Subekti, M.Sc.	Adaninggar Septi Subekti, M.Sc.			Lemmuela Alvita Kurniawati, M.Hum.
Capaian Pembelajaran (CP)					
CPL					
PG-I06	Menguasai konsep metodologi penelitian ESP dan penyajian hasilnya.				
KK-E-02	Mampu merancang metode penelitian yang diperlukan dalam rangka pengembangan kualitas pengajaran di kelas, mendasarinya dengan kajian pustaka serta hasil penelitian lain yang relevan, serta menyajikannya secara lisan dan tertulis.				
SK-I-03	Menginternalisasi nilai, norma, dan etika akademik.				
CPMK					
CP-MK 1	Mampu mengidentifikasi macam-macam perspektif riset				Model Evaluasi Exercises; Quizzes; TTS; Recorded group presentation on methods;
CP-MK 2	Mampu mengidentifikasi jenis-jenis riset sesuai perspektif riset				Recorded group presentation; Exercises; Quizzes; TTS;
CP-MK 3	Mampu mengidentifikasi praktik-praktik etis dalam riset				Recorded individual presentation on ethics;
CP-MK 4	Mampu memformulasikan research questions dan menentukan methods yang tepat				Exercises; TTS;
CP-MK 5	Mampu melakukan critique lisan dan tertulis atas artikel-artikel jurnal dilihat dari				Essay on journal critique;

		metodologi dan etik	

Deskripsi Singkat Matakuliah	<p>This course aims to provide an overview of methodologies and research ethics to conduct research on language teaching in EFL context. Practically, it provides a comprehensive introduction to conduct research by offering examples of various research methods and foundation of research theories in ELT. The course also introduces elements of the research process within quantitative, qualitative, and mixed methods approaches as well as ethical considerations in conducting research.</p>
Materi Pembelajaran/Pokok Bahasan	<p>Mengidentifikasi jenis-jenis riset sesuai perspektif riset/ Mengidentifikasi praktik-praktik etis dalam riset (research ethics)/ Memformulasikan research questions dan menentukan methods yang tepat/ Melakukan critique atas artikel-artikel jurnal dilihat dari metodologi dan etik/</p>
Pustaka	<p>Pustaka Utama: Creswell, J. (2014). <i>Research design</i>. London: Sage Publications, Ltd. Kothari, C. (2014). <i>Research methodology: Methods and techniques</i>. New Delhi: New Age International Pustaka Pendukung: [Various journal articles]</p>
Media Pembelajaran	<p>Microsoft Office/ Zoom/GMeet/ Video maker applications/ Learning Management System (LMS)/ Module</p>
Dosen Pengajar	<p>Adaninggar Septi Subekti, M.Sc.</p>
Komponen Penilaian	<ul style="list-style-type: none"> - Exercises (15%) - Quizzes (15%) - Recorded group presentation on methods (15%) - TTS (15%) - Recorded individual presentation on ethics (15%)

	- Essay on journal critique (25%)
Metode Pembelajaran	- Kuliah/Transfer Knowledge (TCL) - Small Group Discussion - Cooperative Learning (CL)
Standar Acuan Penilaian	<p>A : 90,0 - 100; A- : 85,0 - 89,9; B+ : 80,0 - 84,9; B : 75,0 - 79,9; B- : 70,0 - 74,9; C+ : 65,0 - 69,9; C : 60,0 - 64,9; D : 55,0 - 59,9; E : < 55/</p> <p>Informasi penting: /</p> <p>Semua tugas dikumpulkan via e-class (kecuali ada instruksi lain). /</p> <p>Mahasiswa kehilangan hak mengikuti TAS apabila presentasi kehadiran kurang dari 75% (minimal 10 kali dari 13 pertemuan sebelum TAS). /</p>

Minggu	Sub-CPMK	Indikator	Kriteria dan Bentuk Penilaian	Metode Pembelajaran	Materi Pembelajaran	Bobot Penilaian
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 (14 September 2020)	Research paradigms/ perspektif riset	Mengetahui beberapa research paradigms: interpretivism, positivism, pragmatism	-	Kuliah/Transfer Knowledge (TCL) Cooperative Learning (CL)	Module on research paradigms	-
2 (21 September 2020)	Qualitative methods Mengetahui perspektif dasar riset kualitatif dan macam-macam methods-nya	Mengidentifikasi perspektif dasar riset kualitatif dan macam-macam methods-nya	Quiz	Kuliah/Transfer Knowledge (TCL) Small Group Discussion	Module on qualitative methods	15% (kolektif)
3 (28 September 2020)	Qualitative methods Mengetahui perspektif dasar riset kualitatif dan macam-macam methods-nya	Mengidentifikasi perspektif dasar riset kualitatif dan macam-macam methods-nya	Exercise	Kuliah/Transfer Knowledge (TCL) Small Group Discussion Cooperative Learning (CL)	Module on quantitative methods	15% (kolektif)
4 (5 Oktober 2020)	Quantitative and mixed method Mengetahui perspektif dasar riset kuantitatif dan macam-macam methods-nya Mengetahui perspektif dasar riset mixed-methods dan contoh-penerapannya	Mengidentifikasi perspektif dasar riset kuantitatif dan macam-macam methods-nya Mengidentifikasi perspektif dasar riset mixed-methods dan contoh penerapannya	Quiz	Kuliah/Transfer Knowledge (TCL) Cooperative Learning (CL) Small Group Discussion	Module on quantitative and mixed methods	15% (kolektif)
5 (12 Oktober 2020)	Formulating research questions	Memformulasikan research questions dan mengidentifikasi	Exercises	Kuliah/Transfer Knowledge (TCL)	Contoh-contoh research questions	15% (kolektif)

		methods yang tepat untuk menjawab research questions tersebut					
6 (19 Oktober 2020)	Submission of group presentation on methods Selections: 1. Research paradigms and qualitative methods, research questions 2. Research paradigms, quantitative and mixed methods research questions	Mengumpulkan tautan recorded presentation on methods	<i>Recorded presentation in groups</i>	-	-	modul, PPT, dan hasil penelusuran daring terkait materi presentasi	15%
7 (26 Oktober 2020)	Tes Tengah Semester (TTS)	Mengerjakan asesmen tertulis mengenai materi yang sudah dipelajari (online)	TTS	-	-	Research paradigms, methods, research questions	15%
8 (2 November 2020)	Research ethics	Mengetahui contoh-contoh praktik etis dalam pelaksanaan riset	Exercises	Kuliah/Transfer Knowledge (TCL) Small Group Discussion Cooperative Learning (CL)	Module, PPT	15% (kolektif)	
9 (9 November 2020)	Research ethics	Mengetahui contoh-contoh praktik etis dalam pelaksanaan riset	<i>Recorded individual presentation on research ethics</i>	Kuliah/Transfer Knowledge (TCL) Cooperative Learning (CL) Small Group Discussion	Module, PPT on research ethics	15%	
10 (16 November 2020)	Critiquing journal articles 1. Critiquing a journal article (teacher's selection) 2. modeling from the teacher	Melakukan critique terhadap suatu jurnal dari segi metodologi dan etik	-	Kuliah/Transfer Knowledge (TCL)	PPT, module, hasil penelusuran daring tentang <i>methods and ethics</i> yang relevan	-	

11 (23 November 2020)	3. students choose journal articles to critique - limited selection*	Melaporkan progress hasil diskusi kelompok Melakukan konsultasi	Consultation (treated as exercise)	Small Group Discussion Cooperative Learning (CL)	Artikel jurnal masing-masing kelompok	15% (kolektif)			
12 (30 November 2020)	Critiquing journal articles 1. Report on progress 2. Consultations and feedback	Melaporkan progress hasil diskusi kelompok Melakukan konsultasi	Consultation (treated as exercise)	Small Group Discussion Cooperative Learning (CL)	Artikel jurnal masing-masing kelompok	15% (kolektif)			
13 (7 Desember 2020)	Critiquing journal articles 1. Report on progress 2. Consultations and feedback	Melaporkan progress hasil diskusi kelompok	Consultation (treated as exercise)	Small Group Discussion	Artikel jurnal masing-masing kelompok	15% (kolektif)			
14 (14 Desember 2020)	Tes Akhir Semester (TAS)	Menulis esai <i>journal critique</i> dalam grup/individual	TAS - pengumpulan esai <i>journal critique</i>	-	Artikel jurnal yang dipilih untuk di <i>critique</i>	25%			

RESEARCH METHODOLOGY IN ELT

Rubrics for video project

Individual recorded video presentation

	86-100 points	70-85 points	60-69 points	50-59 points	0-49 points
Subject contents/details of ideas	All/most of the necessary details are provided. Details are relevant to the topic presented.	Most of the necessary details are provided. Very few important details are irrelevant.	Some important details are missing or irrelevant.	The analysis lacks details necessary for understanding.	No detail is provided.
Video contents and organization	Video includes a clear statement of purpose. Messages are presented in a logical order, with relevant information that supports the video's main ideas.	Information is connected to a theme. Details are logical and information is relevant throughout most of the video	The video lacks a central theme, clear point of view, and logical sequence of information. Much of the information is irrelevant to the overall message	Major sections are missing or there is lack of logical flow.	There is no logical flow at all.
Clarity of explanation and language use	The use of the language maximizes comprehension; explanations are clear and understandable	Most explanations are clear; overall meaning is understandable.	Some explanations cause slight confusion or contain minor errors	Serious difficulty in explaining ideas; there are several major errors.	There is lack of comprehensibility.
Introduction	The introduction is motivating, and hooks the viewer from the beginning. 20-25 points	The introduction is clear and coherent and evokes moderate interest/response from the viewer 15-19 points	The introduction does not orient the viewer to what will follow 10-14 points	-	-

Total score : 325

Minimum score to pass : 195

Teacher: Adaninggar Septi Subekti, M.Sc.

RESEARCH METHODOLOGY IN ELT

Rubrics for video project

Recorded video presentation done in groups

Video : 50% (using rubrics in page 1)

Group work : 50% (Closed-envelope/confidential letters on group members' performance - can be written in English, Indonesian, or combination. As long as it is clear, there is no problem.)

$$\text{GRADE} = \frac{\text{Grade on video} + (\% \text{ group work} \times \text{Grade on video})}{2}$$

Example: Grade on video 80; Grade on group work 85

$$\text{Grade} = \frac{80 + (85\% \times 80)}{2} = \frac{80 + 68}{2} = \frac{148}{2} = 74$$

**RUBRICS FOR FINAL PAPER ASSESSMENT
RESEARCH METHODOLOGY IN ELT
(Essays done in groups)**

ESSAY ASPECT : 50%

Aspects	5	4	3	2
Knowledge and Understanding of Concepts	Student has shown a good understanding on the methodological concepts and ethical procedures used (or not) by the authors of the article	Student has shown an adequate understanding on the methodological concepts and ethical procedures used (or not) by the authors of the article	Student has shown some degree of understanding on the methodological concepts and ethical procedures used (or not) by the authors of the article	Student has shown a small degree of understanding on the methodological concepts and ethical procedures used (or not) by the authors of the article
Knowledge and Use of the Literature	Student has shown strong evidence of reading core and supplementary texts seen from an extensive use of in-text citations and from more than minimum* number of references	Student has shown enough evidence of reading core and supplementary texts seen from adequate use of in-text citations with minimum number of references	Student has shown some evidence of reading core and supplementary texts seen from a fairly minimum use of in-text citations and from less than minimum number of references	Student has shown little evidence of reading core and supplementary texts seen from insufficient use of in-text citations and from less than minimum number of references
Constructing Academic Discourse	Student has structured the assignment effectively, adopted an appropriately academic style and tone. This includes perfect format (Thesis Statement, Topic sentences, introduction, body, and conclusion paragraphs), perfect spelling and vocabulary, and mostly perfect grammar.	Student has structured the assignment rather effectively, adopted an academic style and tone with occasional inaccuracies. This includes incomplete components of Thesis Statement, topic sentences, introduction, body, and conclusion paragraphs, perfect spelling and vocabulary, and adequately accurate grammar.	Student has structured the assignment in a way that slightly deviates from academic style and tone. This includes incomplete components of Thesis Statement, topic sentences, introduction, body, and conclusion paragraphs, occasional mistakes in spelling and vocabulary, and fairly inaccurate grammar.	Student has structured the assignment in a way that deviates from academic style and tone. This includes the inexistence several of the components: Thesis Statement, topic sentences, introduction, body, and conclusion paragraphs, and includes frequent mistakes in spelling and vocabulary, and highly inaccurate grammar.

GROUP WORK ASPECT : 50%

Closed-envelope/confidential letters on group members' performance (can be written in English, Indonesian, or combination. As long as it is clear, there is no problem.)

**RUBRICS FOR FINAL PAPER ASSESSMENT
RESEARCH METHODOLOGY IN ELT
(Essays done in groups)**

$$\text{GRADE} = \frac{\text{Grade on essay} + (\% \text{ group work} \times \text{Grade on essay})}{2}$$

Example: Grade on essay 80; Grade on group work 85

$$\text{Grade} = \frac{80 + (85\% \times 80)}{2} = \frac{80 + 68}{2} = \frac{148}{2} = 74$$

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[Other parts are taken by permission from writing of students from the previous years.]